

## THE USE OF ALPHABET GAME AS A TECHNIQUE

IN TEACHING ENGLISH WORDS

## TO JUNIOR HIGH SCHOOL STUDENTS

The Case Study of the Year Seven SMPN 34 Semarang
in the Academic 2009 / 2010
a final project
submitted in partial fulfillment of the requirements for the degree of Sarjana Pendidikan in English
by
Riska Saprina Dewi
2201405663

ENGLISH DEPARTMENT
FACULTY OF LANGUAGES AND ARTS
SEMARANG STATE UNIVERSITY

## APPROVAL

The final project was approved by the Board of Examiners of the English Department of the Faculty of Languages and Arts of Semarang State University on September 2009.

## Board of Examiners

1. Chairperson

Drs. Dewa Made Kd, M. Pd
NIP. 131404317
2. Secretary

Dra. Rahayu P.H, M. Hum NIP. 132158715
3. First Examiner

Dra. C. Murni Wahyanti, M. A.
NIP. 130805077
4. Second Advisor as Second Examiner

Intan Permata Hapsari, S.Pd. M.Pd.
NIP 132307252
5. First Advisor as Third Examiner Dr. H. Abdurrachman Faridi, M.Pd. NIP 131876218

PERPUSTAKAAN


Approved by
Dean of Faculty of Languages and Arts

Prof. Dr. Rustono, M.Hum
NIP 13128122

## PERNYATAAN

Dengan ini saya,
Nama : Riska Saprina Dewi
Nim : 2201405663
Prodi/Jur : Pendidikan Bahasa Inggris
Fakultas : Fakultas Bahasa dan Seni, Universitas Negeri Semarang Menyatakan dengan sesungguhnya bahwa skripsi / tugas akhir / final project berjudul:
"The Use of Alphabet Game as a Technique in Teaching English
Words to Junior High School Students (The Case Study of the Year
Seven SMPN 34 Semarang)"
yang saya tulis dalam rangka memenuhi salah satu syarat untuk memperoleh gelar sarjana ini benar-benar merupakan karya saya sendiri yang saya hasilkan setelah melakukan penelitian, pembimbingan, diskusi dan pengarahan / ujian.

Semua kutipan baik yang langsung maupun tidak langsung, baik yang diperoleh dari sumber kepustakaan, wahana elektronik, wawancara langsung maupun sumber lainnya yang telah di sertai keterangan mengenai identitas sumbernya dengan cara sebagaimana lazimnya dalam penulisan karya ilmiah.
Dengan demikian, walaupun tim penguji dan dosen pembimbing penulisan skripsi / tugas akhir / final project ini membubuhkan tanda tangan sebagai tanda keabsahannya, seluruh isi karya ilmiah ini tetap menjadi tanggung jawab saya sendiri. Jika kemudian ditemukan pelanggaran terhadap konvensi tata tulis ilmiah yang berlaku, saya bersedia menerima akibatnya.
Demikian, harap pernyataan ini di gunakan sebagaimana mestinya.

Semarang, September 2009
Yang membuat pernyataan
Riska Saprina Dewi
NIM. 2201405663
"Put first thing first, seek first to understand and then to be understood" (Stevan Covery)

To:
My beloved father and mother, who give me a lot of support and motivation,

My beloved brothers and sister, (tia, ilham, adam),
My beloved fiancé (Brana Pandega) who helps, supports, and loves me,

- My best friends (zie, widi, yuli) who have shared joy, laugh, love and sadness.


## ACKNOWLEDGEMENT

First of all, the writer thanks to God, ALLAH S.W.T, for blessing and his guidance, so that the writer could finish this final project, which is written to fulfill one of the requirements for the Degree of Sarjana Pendidikan in English Department at Semarang State University. The writer realizes that this final project could not be finished without the help and support of other people who sacrificed their valuable time in giving advice to complete this final project.

On this occasion, the writer would like to express her gratitude to:

1. Dr. H. Abdurrachman Faridi, M.Pd., as my first advisor, who has led me and provided valuable and continuous guidance, advice, as well as encouragement in making and completing this final project.
2. Intan Permata Hapsari, S.Pd. M.Pd., as my second advisor, who has read this final project carefully and given many suggestions and corrections for its improvement.
3. All lecturers in English Department of Semarang State University who had been teaching and sharing their knowledge since the writer began her study at Semarang State University.
4. The headmaster of SMPN 34 Semarang who allowed her to carry out the research in her school, the English teacher: Sudarsih S.Pd, all staffs and students especially class VII A, VII B, VII D, who have allowed and spent the time to let her do research there.
5. My parents, sister, brothers, my beloved fiancé (Brana Pandega), and not to mention my best friends (Zie, widi, yuli) who have given support to finish her study.

Finally, the writer realizes that this final project is still far from being perfect. Thus, she would like to expect any suggestions for the improvement of it. She hopes that it would be useful for the researchers.

Semarang, September 2009
The writer

Riska Saprina Dewi
2201405663


#### Abstract

Dewi, Riska.S. 2009. The Use of Alphabet Game as a Technique in Teaching English Words to Junior High School Students (The Case Study of the Year Seven SMPN 34 Semarang ). Final Project. English Department. S1 Degree of Education. First Advisor: Dr. Abdurrachman Faridi, MPd., Second Advisor: Intan Permata Hapsari, S.Pd. MPd.


## Key Words: Alphabet Game, English Words, Year Seven Students of Junior

 High School.This study dealt with the use of alphabet game as a technique in teaching English words to junior high school students. The problem that is discussed in this study is whether teaching English words (vocabulary) by using alphabet game is effective or not for junior high school students. Therefore, the objective of the study is to find out whether teaching English words (vocabulary) by using alphabet game is effective or not for junior high school students.

The population of this study is the year seven students of SMP N 34 Semarang in the academic year of 2009/2010. The number of population is 270 students is divided into seven classes. In taking sample, the researcher used simple random sampling. She chose 76 students from class $\mathrm{VII}^{\mathrm{B}}$ as the experimental group and class $\mathrm{VII}^{\mathrm{D}}$ as the control group. The treatments given to the groups were different but the materials and topics were the same. The experimental group was treated by using alphabet game. Meanwhile, the control group was taught by using conventional strategy.

Before conducting the research, the instrument had been tried out first. The purposes of conducting the try out was to find out the validity, reliability, item difficulty, and discriminating power. The test consisted of three part in form of multiple choices, filling the blank and matching the word.The research was conducted by giving a pre-test to the students. After that, the treatments were given to them. The activity was continued by playing alphabet game for each treatment. At the end of the research, she gave a post-test to them.

In analyzing the data, the researcher used t-test formula. Based on the data analysis, the result of the students' post-test was higher than the result of the students' pre-test. It can be concluded that there was a significant difference of the result of the students' pre-test and post-test. The result of the research showed that the students' progress in mastering English words (vocabulary) during the treatment conducted was good.

The mean of the pre-test for experimental group was 55.19, and the mean of the post-test was 82.12 . Meanwhile the mean of the pre-test for control group was 50.90 , and the mean of the post-test was 66.39 . The result shows that the mean of the post test was higher than the mean of the pre-test. It can be concluded that the students' achievement in learning English words (vocabulary) through alphabet game had a significant improvement. Based on this conclusion, it is recommended that English teachers can apply alphabet game as a technique in teaching English word for junior high school students.

## TABLE OF CONTENT

Acknowledgement ..... V
Abstract ..... vi
Table of Contentvii
List of Table ..... X
List of Appendices ..... xi
Chapter
I. INTRODUCTION
1.1 Background of the Study ..... 1
1.2 Reason for Choosing the Topic ..... 5
1.3 Statement of the Problem ..... 5
1.4 Objectives of the Study ..... 6
1.5 Significance of the Study ..... 6
1.6 Alphabet Game and Conventional Method ..... 7
1.7 Outline of the Study ..... 8
II. REVIEW RELATED TO LITERATURE
2.1 Alphabet Game ..... 10
2.1.1 The Advantages of Using Alphabet Game ..... 12
2.2 English Words (Vocabulary) ..... 14
2.2.1 General Concept of English Words ..... 14
2.2.2 Teaching English Words to the Year Seven Students of Junior High School ..... 16
2.2.3 Principle of Teaching English Words ..... 19
2.2.4 Technique in Teaching English Words to the Year Seven Students of Junior High School ..... 21
2.3 Teaching English to the Year Seven Students of Junior High School ..... 23
2.3.1 2006 English Curiculum for Junior High School ..... 24
2.3.2 2006 Competence of English in SMP/MTs to Achieve ..... 25
2.4 Characteristics of the Year Seven Students of Junior High School ..... 26
III. METHOD OF INVESTIGATION
3.1 Sources of the Data ..... 29
3.2 Subject of the Study ..... 30
3.2.1 Population ..... 30
3.2.2 Sample ..... 30
3.2.3 Sampling Technique ..... 31
3.3 Variable ..... 32
3.4 Procedure of Experimental Research ..... 33
3.4.1 The Activities of the Experimental Group ..... 34
3.4.2 The Activities of the Control Group ..... 35
3.5 Try Out ..... 36
3.6 Instrument ..... 37
3.6.1 The Construction of the Instrument ..... 37
3.6.2 The Construction of the Test ..... 39
3.7 Condition of the Test ..... 39
3.7.1 Validity of the Test ..... 39
3.7.2 Reliability ..... 40
3.8 Item Analysis ..... 41
3.8.1 The Difficulty Level of the Test ..... 42
3.8.2 Discriminating Power ..... 42
3.9 Method of Collecting the Data ..... 44
3.10 Analysis of Pre-test and Post-test. ..... 45
3.10.1 Pre-test ..... 45
3.10.2 Post-test ..... 45
3.10.3 Analyzing ..... 46
IV. RESEARCH FINDINGS AND DATA ANALYSIS
4.1 Try Out Finding ..... 48
4.1.1 Validity ..... 48
4.1.2 Reliability ..... 48
4.1.3 Item Analysis ..... 49
4.1.3.1 The Level Difficulty ..... 49
4.1.3.2 The Discriminating Power ..... 49
4.2 Pre-test and Post-test Findings ..... 50
4.3 Test of Significance ..... 50
4.4 Discussion of the Research Findings ..... 51
V. CONCLUSION AND SUGGESTION
3.1 Conclusion ..... 53
3.2 Suggestion ..... 55

## LIST OF TABLE

1. The Table of Activities During the Research............................................... 34


## LIST OF APPENDICES

1. Try Out Test ..... 59
2. Try Out Item Test ..... 65
3. The Computation of Item Validity ..... 70
4. The Computation of Item Realibility ..... 71
5. The Computation of Level Difficulty ..... 72
6. The Computation of the Discriminating Power. ..... 73
7. Pre-test ..... 74
8. Post-test ..... 80
9. Students Score's of the Pre-test and Post-test
10.T-Test of Pre-test Data86
11.T-Test of Post-test Data ..... 88

## CHAPTER I

## INTRODUCTION

This chapter contains general background of the study, reason for choosing the topic, statement of the problems, objectives of the study, significance of the study, alphabet game, conventional method and outline of the study.

### 1.1 General Background of the Study

Man is a social being who always needs company in his life. He has to cooperate with others to provide himself with the needs of life. Therefore, he needs a means of communication which is called language. With language man can express his desire, thought and hopes to other people. In order words language plays a key in relationship among human beings as Getrude Boyd, quoted by Norton (1980:4), states:
"Language is the most important form of human communication. Not only is language human, it is uniquely human and the key to all human activities. It is vehicle through which the world can be understood and appreciated; without language, people are isolated and helpless". (Norton, 1980:4)

However, there are so many different languages in the world, which are used by different communities. Therefore, as the member of the international society, we need to master more than just our native language, in order to be able to communicate and interact well with other people from different
communities. Of course, we do not need to master all of them, since it is impossible.

The
best
solution is by learning a language, which is widely used by most of people all over the world. The language is English.

English is as an international language used as a means of communication throughout the world. In Indonesia, English has an important role in education, but it is only a kind of subject that should be known and mastered by students in the classroom, rather it is used when they enter their society.

In Indonesia, English is introduced into the curriculum and considered as the first foreign language and a compulsory subject to be taught at junior high school, senior high school and at university for some semester. Ramelan (1992:1) stated that "English has been taught in this country as the first foreign language since the proclamation of Indonesia on 17th of August 1945."

Teaching English in junior high school covers four skills. They are listening, speaking, writing and reading. In fact, all of them are very important for the students to learn. Besides, the students' mastery of these skills is very important, it has also the main purpose of learning English that is developing ability of communication in language, both spoken and written.

Teacher is one of the components to improve education. In this case, the responsibility of an English teacher at the junior high school is very important because he or she has the task to give the basic introduction of the first foreign language. He or she has to introduce English as a new language and its elements like vocabulary (English words), pronunciation, spelling and grammar or structure that is different from student's mother tongue by giving clear explanation about
the meaning of the new language including how to use it and how to construct sentences in a correct grammatical form.

Teaching English words (vocabulary) in junior high school is not an easy job, because sometimes the teachers often find their students have difficulties to express their idea or catch the meaning of words in paragraph because of their weakness in mastering English words (vocabulary). These difficulties occur since the Indonesian English words (vocabulary) are different from English. In teaching English words (vocabulary) to students at the junior high school, the first thing should be done is introducing the students with English words (vocabulary) including how to write and to pronounce it.

Moreover, the teachers sometimes encounter difficulties in deciding what kind of technique to be used in teaching English words (vocabulary). Many different approaches and activities can be used to help students develop their English words (vocabulary). It is important that the teachers include English words (vocabulary) items that are part of the curriculum as well as provide students with opportunities to work with items they find meaningful. Linse (2006 :134) suggests that "a number of different techniques and strategies were provided that can be used with words that are selected by the teacher as well students-selected items". On the other hand, the teacher must know students' interest and needs. He or she has to provide a variety of activities, which will have meaning for the students and which will foster student's desire to learn English words (vocabulary). He or she should teach English words (vocabulary)
through enjoyable activities, which will make the students memorize English words (vocabulary) easily.

Therefore, learning a new language should be fun, interactive and exciting. Games are among the activities that make students learn while having fun, a teacher can use easy and interesting games in teaching English, especially in teaching English words (vocabulary). As stated by Wright, et. al. (1994:1) that "games help and encourage many learners to sustain their interest and work". M oreover, Agoestyowati (2007: xiii) states that "the use of games in learning environment will not only change the dynamic of the class, but it will also rejuvenate students and help the brain to learn more effectively". Besides games also help teacher to create contexts which the language is useful and meaningful. In order to make the junior high school students enjoy and are interested in learning English and can improve their mastery in English words (vocabulary) easily, the writer proposes the alphabet game as a technique in teaching English words to the year seven students of junior high school. While playing this game, the students can learn to make, write, and also remember English words (vocabulary) which have been mastered. So, it can make them fun in learning English.

### 1.2 Reason for Choosing the Topic

The writer decides to study the use of alphabet game in teaching English words (vocabulary) because of the following reasons:

1) English words (vocabulary) is an important component in mastering language, so it is important to find out how to make students interested in improving their English words (vocabulary).
2) Generally students like playing game to help them remember the words that they have learnt.
3) The words of alphabet game are those related to their environment so they can remember the lesson easily.
4) The writer would like to introduce alphabet game as a technique in teaching English words (vocabulary) to the year seven students of junior high school.
5) The writer would like to know how many words that the students get in five minutes by playing alphabet game.

## PERPUSTAKAAN

### 1.3 Statement of the Problem

Based on the background above, the writer wants to state the problem as follows:

1) Is there any significant difference of the students' English words achievement who taught by using alphabet game and those taught by using conventional strategy?
2) Is alphabet game an effective technique in teaching English words to the year seven students of junior high school?

### 1.4 Objectives of the Study

The objectives of the study can be stated as follows:

1) To find out whether there is any significant difference of the students'

English words achievement who taught by using alphabet game and those taught by using conventional strategy.
2) To find out whether teaching English words by using alphabet game is effective technique or not for the year seven students of junior high school.

### 1.5 Significance of the Study

The writer hopes the study will give significant advantages for:

1) Teachers
a) Hopefully, this study will help the teachers to improve their methods in teaching learning process in the classroom, so that the problems that the teacher and students face in the teaching and learning process can be minimized. In addition, teachers can apply this new method in their classroom to make the teaching learning process more interesting.
b) The teacher could use the alphabet game as an alternative technique in teaching English words (vocabulary) to the year seven students of junior high school.
2) Students
a) Learning English by using alphabet game can improve their understanding and mastering about English words (vocabulary).
b) The students of the year seven of Junior High School have an experience in learning English words (vocabulary) through alphabet game.

### 1.6 Alphabet Game and Conventional Strategy

1) Alphabet Game

Alphabet game is a word game which can be played by a student or a group which consists of two or four students to make a new word from the last letter of the previous word, but the time is only in five minutes to get many words. The group which gets many words in five minutes, they will be the winner in this game. (Agoestyawati, 2007: 14)
2) Conventional Strategy

Based on the writer's experience during the research, the English teacher in the control group applied the conventional strategy. This strategy was indicated by giving explanation of materials. In this case, the teacher explained the materials based on textbook monotonously. The teacher was dominant in the classroom which caused the difficulty for the students to express their ideas and ask questions, when they did not understand the teacher's explanation. The teacher only taught the materials on the textbook without developing it. The students only got little comprehension because the teacher did not encourage them to analyze the concept in textbook. As a
result the students only did exercises given by their teachers and did not know the purpose of studying the materials. Generally, teachers who apply this strategy will find their students are only able to memorize the materials and not able to understand to apply the concept in their daily life.

### 1.7 Outline of the Study

This study consists of five chapters, chapter I cover background of the study, reason for choosing the topic, statement of the problem, objectives of the study, significance of the study, alphabet game, conventional strategy and outline of the study.

Chapter II discusses the review of related literature in connection with alphabet game, general concept of English words (Vocabulary), teaching English words (vocabulary) to the year seven students of junior high school, principle of teaching English words (vocabulary), technique in teaching English words (vocabulary) to the year seven students of junior high school, teaching English to the year seven students of junior high school, characteristics of the year seven students of junior high school.

Chapter III discusses the research method or method of investigation. The discussion elaborates sources of the data, subjects of the study, variable, procedure of experimental research, try out, instrument, condition of the test,
item analysis, method of collecting the data, the analysis of pre-test and posttest.

Chapter IV presents the result of the data analysis and discussion about the result which presents try-out finding, pre-test and post-test findings, test significance, discussion of the research findings.

Chapter $V$, the writer ends the discussion with the conclusion and suggestion of the study.

## CHAPTER II

## REVIEW OF RELATED LITERATURE

This chapter is about the review of related literature. It consists of alphabet game, the advantage of using alphabet game, general concept of English words (vocabulary), teaching English words (vocabulary) to the year seven students of junior high school, principle of teaching English words (Vocabulary), technique in teaching English words (vocabulary) to the year seven students of junior high school, teaching English to the year seven students of junior high school, characteristics of the year seven students of junior high school.

### 2.1 Alphabet Game

Alphabet game is a great way to stimulate students' cognitive skills and spend quality time with the students while enjoying a fun activity. If games are pleasant experiences, this game will help teacher and students in teaching and learning English words. By using game, teachers can create a nice climate in class and make students enjoy in learning English. Students will find that it is a pleasure to learn English. Games are often used to fill in a few minutes at the end of the lesson, or to occupy some of the faster students while the others catch up on an exercise (Rixon, 1981:69).

Games for teaching are set of play that consist of material to be taught to the students in question and answers are becoming the main elements in playing games. There must be more than one group, because from competition students
will take a complete participation. Rixon (1981: 1) states that "the first thing that many people think of in connecting with games is competition among players".

In this study the writer chooses the alphabet game as a technique in teaching English words (vocabulary). The writer takes this game from the book of 102 English Games by Agoestyowati (2007:14). She explains that the alphabet game is a word game which is played by a group consists of two or four players, indeed it can be played by one player. In this game, the players are asked to make a new word from the last letter of the previous word. For example: PEN, the players are asked to make a new word beginning with N (the last letter of the previous word), NEVER, then the next players have to make a word beginning with R and it will be continued by the next players. Moreover, the players are asked to make a new word as many as possible until the time is up. (Agoestyowati, 2007: 14)

Furthermore, Beltran states that "alphabet game should help a child begin to recognize the letters of the alphabet when they see them, then to learn the name for each symbol, both capital and lower case, upon sight. Once being able to name the letters, a child can move on to learning to put the letters in order, such as the alphabet, or putting them together and memorizing sequences for simple words, such as "c-a-t" and "d-o-g." Once a child has mastered identifying his letters, he moves on to learning that each letter has its own sound, which is the beginning of phonics." (http://www.eHow.com)

In addition, according to Webster (2004: 3), "alphabet is a set of letters or other characters with which one or more languages are written esp, if arranged in
a customary order". Whereas, according to Hornby (1995:127) " game is an activity or a sport with rules in which people or teams compete against each other."

Moreover, according to Beltran the whole point of alphabet game is to stimulate students in a fun way. As a teacher, we do not show frustration or anger towards the students if they are not learning quickly enough. If they enjoy playing, just keep doing so and do not worry about mistakes. Eventually, it will begin to click. If the teacher has to nag the students to play, or if playing becomes stressful or a power struggle, consider letting it go for a few weeks or months. However, the teachers do not want their students learning the alphabet with unpleasant experiences. They want their students success in playing and learning alphabet game.(http://www.eHow.com)

From those explanations above, it can be concluded that the alphabet game is a word game which can be played by a student or a group which consists of two or four students to make a new word from the last letter of the previous word, but the time is only in five minutes to get many words. The group which gets many words in five minutes, they win the game.

### 2.1.1 The Advantage of Using Alphabet Game

The students, especially young learners will enjoy the school activities when the teacher includes games in their activities. The use of alphabet game gives great help in teaching English words, besides the students can recall their memory while they make a new word in alphabet game. However, students sometimes
cannot always be successfully learning English just by given the word building analysis.

Beltran explains that the alphabet game brings advantages in teaching learning process, it can give great way to help students. These mental exercises also help to form connections in a students' brain, called synapses, which improves memory, increases their capacity to learn and fosters cognitive development. (http://www.eHow.com)

In relation with alphabet game, according to Uberman (1998:21) as quoted from many linguists, the advantages of using games are as follows:

1) Most language games make learners use the language instead of thinking about learning the correct spelling and correct form.
2) They are used to introduce new ideas.
3) They are highly motivating and entertaining and they can give shy students more opportunity to express their opinion and feelings.
4) In the easy, relaxed atmosphere which is created by using games, students remember thing faster and better.
5) Games provide a model of what learners will use the language for real life in the future.

Therefore, games can be used as teaching techniques since they encourage, entertain, teach and promote fluency.

From those explanations above, it can be concluded that hopefully the alphabet game gives the advantages in teaching and learning process English words (vocabulary) and be able to improve students' English words (vocabulary).

### 2.2 English Words (Vocabulary)

### 2.2.1 General Concept of English Words (Vocabulary)

Language consists of words, whereas English words (vocabulary) are also very important in English teaching. Students can continually learn words as they learn structure and as the practice of the sound system. Studying a language, means studying English words (vocabulary), since English words (vocabulary) is one of the components of a language, besides sound system, grammar and culture. We know that words support the speaker in communication to express their ideas. For instance, if someone wants to say something, he or she should know and choose the appropriate words to express his or her ideas, so that people can understand it.

Moreover, vocabulary can be heard and used on every occasion and for all purposes every day. It is difficult for someone to answer the question of what vocabulary is. Therefore, the answer is not as easy as how it is issued. Until now, linguists have not had the same opinion about the concept of vocabulary.

Due to the importance of English words (vocabulary) in conducting communication, the writer would like to present several definitions of English words (vocabulary) as follows:

1) English word (vocabulary) is a sum or stock list of words employed by language group, individually, or relation to a subject (Neufeldt, 1995:1494).
2) English word (vocabulary) is a total number of words in a language with their meaning and known to a person and used in particular book (Hornby, 1995:1371).
3) English word (vocabulary) is a list or collection of words and phrases, usually in alphabetically arranged, and explained or defined (Webster, 2004:1400).
4) English word (vocabulary) is the collection of words that an individual knows (Linse, 2006:121).

Meanwhile, according to websites below, definition of vocabulary can be presented as follows:

1) Vocabulary is defined as all the words known and used by a particular person. However, the words known and used by a particular person do not constitute all the words a person is exposed to. (http//: www.wikipedia.com)
2) Vocabulary is a collection of words alphabetized; a dictionary. And also, the collection of words one knows and uses. (http://www.allwords.com/word-vocabulary.html)
3) Vocabulary is a list or collection of words arranged in alphabetical order and explained; a dictionary or lexicon, either of a whole language, a single work or author, a branch of science, or the like; a word-book. (http://www.brainyquote.com)

In addition, according to Longman (1995:1745) " vocabulary is all the words that someone knows, learns, or uses." Moreover, "vocabulary is a list of words with explanation of their meanings, in a book for learning foreign languages".

From the definition above, the writer concludes that vocabulary is a stock of words and phrases in a language with meanings that are considered as cultural meaning used by group of people or individual in conducting communication in community.

## © NEGEP

### 2.2.2 Teaching English Words (Vocabulary) to the Year Seven Students of Junior High School

English is taught as a compulsory subject at schools from junior high school up to university. The goals of English teaching at junior high school is to give language skills listening, speaking, reading and writing. They also have to master the English components, which include grammar, vocabulary, and pronunciation (in speech) or spelling (in writing). Those who have mastered those four skills and the English components are regarded to be able to use this language at recognition level as well as at the production level. People cannot deny that English word (vocabulary) is a topic that should be given for students in learning and mastering foreign language.

Furthermore, by referring to what English words (vocabulary) to teach, the teachers have to select the words that are presented in a given theme in such a way that they start from the easier to the more complex and difficult ones. In addition, the teacher should not discuss another topic until the topic being taught is completed, so as not to make the students confused.

In teaching English words (vocabulary) to the year seven students of junior high school, teacher has to select suitable words according to the curriculum to teach to the first stage. The words should be in line with the level of the students and the topics. Besides, he or she may also select media and methods to be applied in the class. Finnochiaro (1974: 73-74) gives some comments related to the English words (vocabulary) teaching. They are:

1) English words (vocabulary) should be taught in normal speech utterance.
2) New English word (vocabulary) items should be introduced in known structures. Words about part of our body should be given in one lesson, while words about food in another.
3) If possible, the English word (vocabulary) items should be centred about one topic.
4) If familiar word is met in a new context, it should be taught again and practiced. A review or motion of the known meaning of the word should be made so that the students will understand the contrast. Whenever possible, only one context should be taught at one time.
5) English words (vocabulary) items should be taught in the same way that the teacher teaches everything else. She or he gives the students an understanding of the meaning in many ways. She or he dramatizes, illustrates using her or him and the students' show pictures, and uses any appropriate media and methods.
6) English words (vocabulary) items should be reintroduced many times with all the structures and in all in the situations in which they can logically be used.
7) The students should be encouraged to learn and use nouns, verbs, adjectives, and adverbs that contain the same root. In this phrase, the teacher may help them prepare four column word charts.

Having different learning opportunities will help improving students' overall language ability by improving their English words (vocabulary). According to Brand (2004:4) the goal is for students to become word-savvy, to develop an understanding of how words work within context of reading and writing, and to become excited about words as they learn to manipulate them in playful ways. Moreover as stated by Nation (2003: 122) "teachers should facilitate English words (vocabulary) learning by teaching learners useful words and by teaching strategies to help learners figure out meanings on their own."

Based on the explanation above, the writer can conclude that students need to acquire English word (vocabulary) learning strategies in order to discover the meaning of new words. The strategies should be useful within the classroom as well as when students are in a situation where they encounter new and unfamiliar words on their word. The strategies should also help children acquire new English words (vocabulary) that they hear and see.

### 2.2.3 Principle of Teaching English Words (Vocabulary)

In teaching-learning English words (vocabulary), the teacher as the authority of the class has the job of managing the students' learning to gain the target of the vocabulary.

According to Wallace (1982: 27-29) there are six principles on which teaching vocabulary is to be based, they are:

1) Aims

The aims have to be clear for the teacher. How many of the things listed does the teacher expect the learner to be able to achieve the vocabulary? What kinds of word?
2) Quantity

The teacher may have to decide on the number of vocabulary items to learn. How many new words in the lesson can the learner learn? If there are too many words, the student may become confused and discouraged.
3) Need

In teaching vocabulary, the teacher has to choose the words really needed by his students in communication. The students should be put in a situation where they have to communicate and get the words they need.

## 4) Frequent Exposure and Repetition

Frequent exposure and repetition mean that the teacher should give much practice on repetition so that his students master the target well. He should also give opportunity to the students to use the words in writing or speaking.
5) Meaningful Presentation

In teaching vocabulary, the teacher should present the target words in the way that their meanings are perfectly clear and unambiguous.
6) Situation of Presentation

The teacher should tell the students that they have to use the words appropriately. The use of words depends on the situation in which they are speaking and depends on the person to whom they are addressing.

Furthermore, in teaching English words (vocabulary) the teacher teaches first the words that express the most common experience of the students. The teacher must also teach the word that expresses the situation that the students know very well, and through experience without attending vocabulary clauses. Students will master a number of words when they become familiar with the situation where the words frequently occur.

From the principles above, in teaching-learning process the teacher should identify who the students are, what their needs are, and how the teacher should teach in a simple and interesting way. Different age of students indicate that they also have different needs and interest.

### 2.2.4 Technique in Teaching English Words (Vocabulary) to the Year Seven Students of Junior High School

Junior high school was formed to provide a school for adolescents in whom they would study a curriculum different from that of the elementary school but not as advanced as that of the high school. Teaching vocabulary to adolescents is different from teaching them to children or to adult. To teach vocabulary to
adolescents who have wider knowledge than children, a teacher must have some techniques, which are different from that used in teaching vocabulary to children.

Furthermore, in this case, teacher has to draw adolescents' interest and arouse their motivation by choosing a medium in this teaching. If the adolescents are motivated, they will participate actively and will learn hard during the teaching learning process. Adolescents, of course, have experience in learning vocabulary, so the material that is taught to them should be the development of children's material. The teacher may give specialized vocabulary to them, because they are actually ready to receive it.

Applying technique in the process of teaching and learning English words (vocabulary) of course cannot be neglected, according to Freeman (2000:1) "technique is the action of the method." Whereas, "method is the practical realization of an approach which refers to theories about the nature of language and language learning that serves as the source of practices and principles in language teaching" (Harmer, 1998: 78),

In teaching English words (vocabulary) at the junior high school, a teacher should choose and apply some techniques which are suitable with the students' need and curriculum. Before applying technique which will be used, teacher must be selective in choosing one effective technique that will make students always remember new words introduced by the teacher. Hubbard et. al. as stated by Uberman (1998:20) states that "he teacher must make sure the students have understood the new words, which will be remembered better if they are introduced in memorable way. If the teacher wants the students to remember new English
words (vocabulary), it needs to be learnt in context, practiced and then revised to prevent students from forgetting".

Concerning with the technique of teaching vocabulary, according to Uberman, as quoted by Manikam (2009: 20), the following is types of presentation techniques:

1) Visual techniques

Visual techniques are very effective. Gerlach and Ely (1980:2667) agree with the idea by saying, "when the facts and the concepts are concrete, specific, and structures, visual examples, and cues are more effective in eliciting verbal responses than a word and other symbols".
2) Verbal explanation

To know the meaning of new vocabulary in a context, students can use verbal explanation such as context clues. Ying (2001) in his article Acquiring Vocabulary through a Context Based Approach concludes the types of context that can help the reader infer the meaning of new word, are: morphology, reference words, cohesion, synonym, antonym, definition, etc.
3) Use dictionary

Students can use dictionary to find out meanings of unfamiliar words. There are some kinds of dictionaries, thesauri and the like.

### 2.3 Teaching English to the Year Seven Students of Junior High

## School

English is one of the compulsory subjects, and it is very important to learn it because it is one of the international languages that requires as a bridge of communication between the various countries in the world.

In order to support the English teaching and learning, Indonesian government has constructed Kurikulum Tingkat Satuan Pendidikan (KTSP) for elementary school, junior high school, and senior high school. This curriculum is used for guidance the teachers of SD, SMP, SMA to develop or create their own teaching.

English has been one of the subjects that is difficult enough to be learnt by students of junior high school especially those of SMP N 34 SEMARANG, it is proved based on the result of the students' scores. In teaching English especially English words (vocabulary), the students are expected to be more active during teaching and learning activities. A teacher in teaching and learning language, especially English should determine what kinds of sub competency should be gained instead of what in the subject she should teach. Then the teacher should seek for different sources that support the competency achievement instead of sticking to one book text.

Eventhough, English is taught for many years of school, students' achievement in English is still unsatisfactory. Some students have taken an additional lesson of English in many informal institutions. The unsatisfactory results might be caused by the different elements between the two languages.

These different elements have to do with the differences in sound system, grammatical pattern, vocabulary items, spelling pronunciation, etc.

There are many factors why the system of education in Indonesia cannot be done well such as; the limitation of teachers' understanding about the system of curriculum based competence, the limitation of medium and infrastructure which is had by schools in Indonesia.

### 2.3.1 2006 English Curriculum for Junior High School (SMP/MTs)

2006 curriculum is called School Based Curriculum which is in Bahasa Indonesia called Kurikulum Tingkat Satuan Pendidikan (KTSP). It is the main basic for every institution in Indonesia to arrange their own syllabus for teaching and learning. It consists of the socialization, standard and basic competence, syllabus and also provided with lesson plan. Inside of the syllabus 2006 curriculum there is always 2004 curriculum. 2004 curriculum is the basic design of 2006 curriculum. So, it can be said that 2006 is the completion of 2004 curriculum.

### 2.3.2 2006 Competence of English in SMP/MTs to Achieve

According to the 2006 curriculum, competence standard of English subject at SMP and MTs are to communicate the language in spoken and written using various texts fluently and accurately. They are presented in four basic skills:

1) Listening: understanding various meaning (interpersonal, ideational, textual) in various interactional spoken texts and monologue especially in form of descriptive, narrative, recount, procedure, report, and anecdote text.
2) Speaking: telling various meanings (interpersonal, ideational, textual) in various interactional spoken texts and monologue especially in form of descriptive, narrative, recount, procedure, report and anecdote text.
3) Reading: understanding various meanings (interpersonal, ideational, textual) in a various interactional written text and monologue especially in form of descriptive, narrative, recount, procedure, report and anecdote text.
4) Writing: expressing various meanings (interpersonal, ideational, textual) using rhetorical development of various written text especially in form of descriptive, narrative, recount, procedure, report and anecdote text.

Based on 2006 English curriculum states that the year seven students of junior high school should master listening, speaking, reading and writing skills in form of description and procedure text.

### 2.4 Characteristics of the Year Seven Students of Junior High School

Junior high school students have special characteristics that make them PERPUSTAKAAN different from younger and older students. The students of junior high school have a period of changing from children to adult. In this period, they are more interested in thinking and doing something, but they also still have children emotions, such as interested in playing games. They learn everything in this mature period slowly. So, they should be taught to get more responsibility without ignoring their childness.

The range of the age of junior high school students varied between thirteen to fifteen years old. They are in the process of changing from children to adult. Satria (2006 : 11) comments that "the children of thirteen to fifteen seem to be less lively and numerous than adults. They are so much less motivated and they show outright discipline problems."

As a teacher it is essential for us to understand their characteristics, so that we will be able to design the appropriate and adequate programs to fit the particular requirements of individuals in this age group. According to David and Tom (1993:30) as quoted by Purwaningsih (2008:11), certain psychological and psychological characteristics of youngster in the 11 to 14 years old group require a set of educational conditions in the school.

Moreover, Scott and Ytreberg (1990:2-4) state the characteristics of children of eleven to fourteen years of age as follows:

1) They are competent users of mother tongue.
2) They can tell the difference between fact and fiction.
3) They love to play and learn best when they enjoy themselves. But they also take themselves seriously and like to think that what they are doing is real work.
4) They are enthusiastic and positive about learning.
5) They are able to work with others and learn from others.

In addition, according to Pennington in his article, he states that by ages 12, 13 , and 14 , most students have begun developing the ability to understand symbolic ideas and abstract concepts. According to Piaget's classifications,
students will range in development from the concrete operational stage of development to the ability to the formal operational stage. In fact, studies show that brain growth slows down during these years, so cognitive skills of learners may expand at a slower rate; however, refinement of these skills can certainly be reinforced. (http://ezinearticles.com/English-Teaching-Strategies-Especially-forTeacher)

Based on the explanation about characteristics of adolescents above, the writer concludes that the age of students in junior high school has a period of changing from children to adult. So, they need something special task in education. School and teachers should provide opportunities for them to explore and experiment in a stable and supportive atmospheres, because they learn new experience, new role, and this range of age is one of the most challenging times in life. They also like to be encouraged to respond to the texts and situation with their own thought and experiences, rather than just by answering questions and doing abstract learning activities. The teachers have to give the students tasks that they are able to do. Alphabet as one games as well as tasks for children and teenagers might be a good resource for teaching English words (yocabularies) in an English learning classroom. Since junior high school students are teenagers, they may have interest in learning English words (vocabulary) through alphabet games.

## CHAPTER III METHOD OF INVESTIGATION

In chapter III, the writer discusses the research method or method of investigation. The discussion elaborates sources of the data, subjects of the study, variable, procedure of experimental research, try out, instrument, condition of the test, item analysis, method of collecting the data, the analysis of pre-test and posttest.

## NEGER/

### 3.1 Sources of the Data

The definition of source of the data is stated by Arikunto (2002:102). She states that "the sources of data are subjects where data come from." In this study, the writer used the research procedures in order to get the required data. The research was done by conducting an experiment". In this research, the aims of the study are to know how many words which students get in using the alphabet game as a technique in teaching English words to the year seven students of junior high school.

This research was conducted at SMP N 34 Semarang, in the academic year 2009-2010.

### 3.2 Subject of the Study

### 3.2.1 Population

Population refers to the object of investigation. Arikunto (1995:115) states that "Population is a set or correlation of all elements possessing one or more attributes of interest".

Hadi (1980:35) states that "population is a group of people or item from which the data are collected." In addition, Brown (2004:8) mentions that "population is any group of individual that have one or more characteristics in common that are of interest to the researcher."

The population of this study was the year seven students of SMPN 34 SEMARANG in the academic year of 2009/2010. There were seven classes; VII A, VII B, VII C, VII D, VII E, VII F, VII G. Since the number of population is large; there are 270 students from seven classes, so it was difficult for the writer to observe the entire population. Therefore, a researcher had to select a sample to study a population more effectively.

### 3.2.2 Sample

PERPUSTAKAAN
Arikunto (2002:109) states that "sample is a part of population or the representation of population being assessed." Therefore, the process of taking the sample from the population is crucial in a research. The writer asked permission to the headmaster to do the experiment there and she permitted her to do it. She asked the writer to consult with the English teacher.

### 3.2.3 Sampling Technique

The number of the year seven students of SMPN 34 Semarang is 270 , it is divided into 7 classes. Then, the writer asked permission to the teacher to take three classes as samples. There are 76 students for the two classes of experimental group and control group. Besides, the other one class was taken as class of try out class.

Ideally, a sample is taken at random to avoid bias in the sense that no member of population has more chance of being selected as sample. According to Gay (1987:101) "samples are usually drawn by random samples, each students of the population has an equal chance of being selected for the samples."

According to Best (1981: 9), randomization has two important applications in research:

1) Selecting groups of individuals for observation that are representative of population about which the researcher wishes.
2) Equating experimental and control groups in an experiment. Assigning individuals by random assignment is the best method of providing their equivalence.

PERPUSTAKAAN
In this study, the writer used random sampling because there are some limitations, it was impossible to observe all samples in this research. Those limitations were the sample of this study was the students' fresh-graduate from elementary school. They were the year seven students of SMPN 34 in the academic of 2009 / 2010. Therefore, the writer assumed that the averages of students' quality are different. They have low, medium and high intelligence.

However, they have equal background. They are in the same level, medium to low background. Besides, they have not had the scores which as consideration for the process of sampling technique.

According to Gay (1987:101), "sampling is the process of selecting a number of individuals to represent the larger group from which they are selected." The process of sampling technique proposed by Gay (1987:104-105) is the very simple way of random sampling. The process of taking the samples was employed as follows:

1) Wrote each individual's class in a separate slip of paper.
2) Placed all the slips in a container.
3) Shook the container.
4) Selected the two slips from the container.

Therefore, the result which was gotten of the process of taking random sampling was $\mathrm{VII}^{\mathrm{B}}$ as the experiment group and $\mathrm{VII}^{\mathrm{F}}$ as the control group by shaking the container. PERPUSTAKAAN


### 3.3 Variable

Kerlinger (1965:35) states that "a variable is something that varies." Variable, by definition "is the object of an experiment"(Arikunto, 2002:96). In this study, there were two variables; the independent variable and the dependent variable. The independent variable is the presumed cause of the dependent variable, and the dependent variable is the presumed effect of the independent
variable. In this experiment, therefore, the methods in teaching English words (vocabulary) were the independent variables. They were the form of using alphabet game in teaching English words (vocabulary) for the experimental group and using conventional strategy for the control during the learning process. The dependent variable was the students' learning achievement in the test score.

### 3.4 Procedure of Experimental Research

Conducting an experiment always requires some steps which have to be done in a chronological order. The following steps were taken by the writer as she worked on her experiment:

1) The writer chose the year seven students of SMP N 34 as the population.
2) The writer took two groups of students as the subject randomly, one as the experimental group and the other as the control group.
3) The writer conducted the real experiment. It was conducted by giving pretest, giving treatments by using alphabet game, and post-test. The test consisted of three parts, they were multiple choices, filling in the blank, matching word. Below was the schedule of activities during the research.


Table 3.1 The Table of Activities during the Research

| No | Activities | July | July | July | July | July |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 15,2009 | 18,2009 | 20,2009 | 22,2009 | 27,2009 |  |


| 1. | Try Out |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2. | Pre Test |  |  |  |  |  |
| 3. | Treatment <br> I |  |  |  |  |  |
| 4. | Treatment |  |  |  |  |  |
| II |  |  |  |  |  |  |
| 5. | Post Test |  | CO |  |  |  |

### 3.4.1 The Activities of the Experimental Group

In this experiment, the writer conducted several activities. They were:

1. Pre-test

Pre test was given before doing the experiment. First, the writer came to the chosen class and conditioned herself and explained to the students what they were going to do. It was begun with distributing the instruments and asking them to do the pre-test.

## PERPUSTAKAAN <br> 

2. Activities in conducting the experiment

In conducting the experiment, the students were given with alphabet game as a technique in teaching English words. Then they were given an explanation about alphabet game and the rule of playing alphabet game.

## 3. Post-test

Post test was given after conducting all the activities above. The test to the students was the same as the pre-test.

### 3.4.2 The Activities of the Control Group

## 1. Pre-test

Pre-test was given before doing the treatment. First, the writer came to the chosen class and conditioned herself and explained to the students what they were going to do. It was begun with distributing the instruments and asking them to do the pre-test.
2. Activity in conducting the experiment

In the experiment, the students were given English words' (vocabulary) material based on textbook. They are asked to learn, memorize English words (vocabulary).
3. Post-test

Post test was given after conducting the activity above. The test given to the students was the same as the pre-test.

### 3.5 Try Out

## PERPUSTAKAAN

According to Mouly (1967:371) "a try out is necessary since the result will be used to make sure that the measuring instrument has such characteristics as validity and reliability".

Harris (1969:104) also states that "try out is a kind of pre-testing which provides opportunities for the test-makers to try out the test directions and to check the estimated time required for examinees to work the items of the test. If
the directions are not clear to the subjects, this should certainly be noted at the time of pre-testing so that the instructions can be clarified in the final form".

Based on the statement above, the writer conducted a try out on July 15, 2009 in class $\mathrm{VII}^{\mathrm{A}}$. In this try out test, she used 20 items of multiple-choice test with four options, 10 filling in the blanks, 10 matching. Each test item of multiple choice has one score, each test item of filling in the blank and matching test item has also one score. The highest score for those is 100 that is got from the number correct answer is divided by number of item test, then it times to 100 and the result is got. The students were given 40 minutes to finish the test. After they finished, the test papers were collected and she started to score and analyze the result to find out the validity, reliability, difficulty index and discriminating power.

### 3.6 Instrument

An instrument plays an important role in the research project. It means that PERPUSTAKAAN the reliability of the instrument will influence the reliability of the data obtained.

The instrument which was used in this experiment was intended to measure the student's achievement in English word (vocabulary) test. A test on vocabulary mastery will be very important for the instrument of the research. The writer used a test as the instrument for collecting data. Related to the Kellinger's opinion (1965:481) that "....for most part the instrument used to measure the achievement in education is a test".

According to Heaton (1975:23) there are two basic kinds of test. Those are objective and subjective test. She decided to use an objective test in the form of multiple-choice test, matching and filling in the blank.

### 3.6.1 The Construction of the Instrument

According to Harris (1969:71) there are two basic kinds of test instrument used to measure the four language skills of students, i.e. the objective test and the essay test. The vocabulary multiple choice test item, other kinds of test namely; matching words and filling the blank test items were used here in her investigation. The choice of the test type was based on the following consideration:

1. Multiple choice test is economical in term of the number of items that can be answered in a short period of testing time.

Following are alternate ways to prepare vocabulary multiple-choice completion items (Madsen, 1983: 22);
a Definition.
b Phrase completion. They are idioms and appropriateness to context. The students' test papers can be easily and quckly
scored.
c Phrasal context (not sentence completion)
d Multiple-choice cloze
2. The students' test papers can be easily and quickly scored.
3. Since the correct answers are limited in number, the objective test type will not make different interpretation of the students' test papers.

According to Gronlund (1981:65) "test of achievement might be used for selection, placement, diagnosis or certification of mastery".

Harris (1969:2) states that "achievement test scores are used in evaluating the influences of courses of the study, teachers, teaching methods, and factors considered to be significant in educational practice".

Based on the above statements, she assumed that in this study she would like to conduct the achievement test. It is based on the vocabulary mastery of the students after conducting the teaching learning process by using alphabet game as a technique in teaching English words (vocabulary).

### 3.6.2 The Construction of the Test

To reach the goal of the study, the writer has to construct the test as good as possible. She has to choose the type of test and arrangement of the test.
"A test of vocabulary measures the students' knowledge of the meaning of certain words and words group. Such a test may examine the students' active vocabulary (the words he should be able to recognize and understand when he is listening to someone or when he is reading)". (Heaton, 1975:5)

As an example, the writer conducted the test consisting of 15 multiple choice items, 10 matching words, and 10 filling in the blank. The time was given 30 minutes to do the test.

### 3.7 Condition of the Test

Harris (1969:13) states that "all good tests possess three qualities, i.e. validity, reliability, and practicality". That is to say, any test that we use has to be appropriate in terms of four objectives, dependable in the evidence it provides, and applicable to our particular situation. Those characteristics of a good test would be explained further below.

### 3.7.1 Validity of the Test

"Validity refers to the precise measurement of the test. There are three kinds of validity, i.e. content validity, empirical validity, and face validity" (Harris, 1969: 18). Harris (1969:18) explains that "content validity means the test reflects an analysis according to the views of recognized authorities and analysis in the skill area. Empirical validity depends in large part on the reliability of the test and criterion measure. Face validity is the way the test look whether it is irrelevant, silly, inappropriate, etc."

Each test in this study especially its content was designed based on the material that had been taught in order to be valid. To get the validity of each item, the writer used the Pearson Product Moment Formula as follows:

$$
r_{x y=} \frac{N(\Sigma X Y)-(\Sigma X)(\Sigma Y)}{\sqrt{\left\langle N \Sigma X^{2}-(\Sigma X)^{2} \backslash\left(N \Sigma Y^{2}-(\Sigma Y)^{2}\right)\right.}}
$$

Where:
$r_{x y} \quad$ : The validity of item test
$\mathrm{N} \quad$ : The number of the students
$\mathrm{X} \quad$ : The number of the students who gave right answers
Y : The students' scores

### 3.7.2 Reliability

"Reliability refers to the consistency of measurement that is, to how consistent test score or other evaluation results are from one measurement to another" (Gronlund, 1981:93). In other words, the test measures examiner's ability consistency.

In this study, the writer decided to use Kuder-Richardson formula 21 in measuring the reliability of the test. This formula uses the number of items in the test, the mean of the set of the scores, and the square of the deviation.

The correlation of the variables, which might show the reliability of test, used K-R. 21 formula as follows:
$r_{11}=\left(\frac{\mathrm{k}}{\mathrm{k}-1}\right)\left(1-\frac{\mathrm{M}(\mathrm{k}-\mathrm{M})}{\mathrm{kVt}}\right)$
where:
$\mathrm{r}_{11} \quad$ : Reliability of the test
$k \quad$ : the number of the item test
M : the mean of the score
$\mathrm{V}_{\mathrm{t}}$ : the total variance
The computation of $r_{11}$ is consulted with $r_{\text {table }}$. If the $r_{11}>r_{\text {table }}$ so the instrument of the test is reliable.

### 3.8 Item Analysis

After determining and scoring the try out test, an item analysis was made to evaluate the effectiveness of the items. It was meant to check whether each item met the requirement of a good test item. This item analysis concentrated on two vital features, level of difficulty and discriminating power.

Heaton (1975:172) states that "all items should be examined from the point of view of their difficulty level of examination."

### 3.8.1 The Difficulty Level of the Test

According to Heaton (1975:172), "the index of difficulty or the facility value of an item simply shows how easy or difficult the particular item proved in the test."

An item is considered to have a good difficulty level if it is not too easy or too difficult for the students, so they can answer the items. If a test contains many items, which are too difficult or too easy, it cannot function as a good means of evaluation. Therefore, every item should be analyzed first before it is used in a test. The formula of item difficulty is as follows:

Where:
P : Item difficulty
B : Number of students who answered the item correctly
JS : Number of students
(Arikunto, 1995:212)

### 3.8.2 Discriminating Power

It is also essential to determine the discriminating power of the test items because it can discriminate between the more and the less able students. Heaton (1975:173) states
"The discrimination index of an item indicated the extent to which the item discriminated between the testers, separating the more able testers from the less able. The index of discriminating told us whether those students who performed well on the whole test tended to do well or badly on each item in the test".

There are various methods of obtaining the index of discrimination; here the writer applied the procedure favored by Heaton (1975:175) as follows:

First, the writer counted the number of the students on the upper and lower groups who answered the item correctly. Then, she subtracted the number of students giving correct answers in the upper group, and found the difference in the proportion passing in the lower group. Then, she divided the difference by the total number of candidates in one group. The procedure of calculating the discriminating power explained above could be expressed by the following formula:

Where:
BA : Number of students in the upper group who answered the item correctly.
BB : Number of students in the lower group who answered the item correctly.
JA : Number of all students in the upper group.
JB : Number of students in the lower group.
(Arikunto, 1995:218) PERPUSTAKAAN
The classification of the discrimination index is presented below:
D : $0,00-0,20=$ Poor
D $\quad: 0,21-0,40=$ Satisfactory
D : 0,41-0,71 = Good
D : 0,71-1,00 = Excellent

### 3.9 Method of Collecting the Data

A researcher can use many kinds of data collection like questionnaire, interview, or test. It should be noted, however that all methods of data collection should be objective.

In this study, the writer used the objective test in the form of multiple choices, filling in the blank and matching word items since it is easy to score and administer. It is similar to Heaton's opinion (1975:14) that:
"The multiple choice item is now widely regarded as being one of the most useful of all objective item types. Although it is among the most difficult of all objective item types to construct, it is simple to score and administer".

In scoring the objective test, each correct answer is counted one point using the formula below:


S : Score
R : Total number of correct answer
n : Total number of items
(Heaton, 1975: 14)
A vocabulary test is administered for collection. The test-retest method is used in this investigation. Firstly, a pre-test was given to the students. Pre-test is used as a diagnostic test. This was given for both groups, experimental and control groups, after being treated.

### 3.10 The Analysis of Pre-test and Post-test

Before the experiment was conducted, the writer gave the students pre-test consisting of 15 multiple choice items, 10 filling in the blank, and 10 matching words. At the end of the experiment, post-test was given.

### 3.10.1 Pre-test

The students were given a pre-test in starting the data collection to identify the English words (vocabulary) achievement. The pre test was conducted to 38 students at SMP N 34 Semarang. The test was monitored to get the students do seriously. Here, they were not allowed either to open dictionaries or to ask other students' answer.

### 3.10.2 Post-test

A treatment was given to the students before the post-test was conducted. Here, for the experimental group, alphabet game was used for teaching English words (vocabulary) to the students. For the control group, conventional strategy was used for teaching English words (vocabulary). By doing this, the students were expected to have better English words (vocabulary). It is hoped, the experimental group would be better than the control group in achieving the English words (vocabulary) post-test.

The post-test was conducted to measure the students' abilities after the treatment. The test contained the same items as in the pre-test. Besides, it was given to the same experimental and control groups. Then the results were analyzed.

### 3.10.3 Analyzing

The obtained data were analyzed to get the final result. T-test formula was used in this research to analyze the data. It showed the final result from both
experimental and control groups given different treatments. The formula is showed as follows:
$\mathrm{t}=\frac{\overline{\mathrm{X}_{\mathrm{e}}}-\overline{\mathrm{X}_{\mathrm{k}}}}{\mathrm{s} \sqrt{\frac{1}{\mathrm{n}_{\mathrm{e}}}+\frac{1}{\mathrm{n}_{\mathrm{k}}}}}$
$s=\sqrt{\frac{\left(n_{e}-1\right) S_{e}^{2}+\left(n_{k}-1\right) S_{k}^{2}}{n_{e}+n_{k}-2}}+\mathbb{N}=G /$

Where:

$\mathrm{x}_{\mathrm{k}}$ : the mean of the control group
$n_{e}$ : the number of the students in experimental group
$n_{k}$ : the number of the students in control group
$S_{e}^{2}$ : the deviation of the experimental group
$S^{2}{ }_{k}$ : the deviation of the control group
control group TAKAAN
If the value of $t_{\text {count }}>t_{\text {tabel }}$, it can be concluded that there is a significant difference between experimental group and control group.

## CHAPTER IV <br> RESEARCH FINDINGS AND DATA ANALYSIS

This chapter presents the result of the data analysis and discussion about the result which presents try-out finding, pre-test and post-test findings, test significance, discussion of the research findings.

### 4.1 Try Out Finding

### 4.1.1 Validity

As mentioned in chapter III, validity refers to the precise measurement of the test. In this study, item validity was used to know the index validity of the test. After the writer calculated using Pearson Product Moment. The index validity of the item number 1 was 0.614 . Then the writer consulted the table of $r$ Product Moment with $\mathrm{N}=40$ and significance level $5 \%$ in which $\mathrm{r}=0.312$. Since the result of the computation was higher than $r$ in the table, the index validity of the item number 1 was considered to be valid. The complete data can be seen in Appendix 3.

### 4.1.2 Reliability

A good test must be valid and reliable. Besides the index of validity, the writer also calculated the reliability of the test using formula K-R. 21 formula. The result of computation was $r=0.864$. Since the result of the computation was
higher than r in the table, it was considered that the test was reliable. The complete data can be seen in Appendix 4.

### 4.1.3 Item Analysis

### 4.1.3.1 The Level Difficulty

As mention in chapter III, there are three categories of level of difficulty; they are difficult, medium, and easy. After computing 40 items of try-out test, there were 5 items regarded as unused items in this experiment, because it did not fulfil the requirements based on the criteria the analysis of try out test item, those were $5,8,12,14,19$. Therefore, the 35 items were taken to be pre-test and post test, 14 items were medium, 18 items were easy, and 3 items were difficult.

The next step, the writer calculated the discriminating power in order to determine how well each item discriminated between high-level and low-level examinees. The complete data can be seen in Appendix 5.

### 4.1.3.2 The Discriminating Power

The discrimination index of an item indicated the extent to which the item discriminated between the testers, separating the more able testers from the less able. The index of discriminating tells us whether those students who perform well on the whole test tend to do well or badly on each item in the test. There are five categories of the discrimination index; excellent, good, satisfactory, poor, and very poor. After computing 40 items of try-out test, there were 32 items considered to be satisfactory, 3 items were good and 5 items were poor.

Based on the analysis of validity, difficulty level, and discriminating power, finally 35 items were accepted. 35 items were used as instrument to make the
scoring easy. They were numbers $1,2,3,4,6,7,9,10,11,13,15,16,17,18$, $20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39$ and 40. The complete data can be seen in Appendix 6.

### 4.2 Pre-test and Post-test Findings

Before the experiment was conducted, the writer gave the students pre test consisting of 15 multiple-choice items, 10 filling in the blanks, and 10 matching word items. At the end of the experiment, the post test was given.

The calculation of the means of pre test and post test were pre test 55.19 for experimental group, 50.90 for control group and post test 82.12 for experimental group, 66.39 for control group. If we compare the two means it is clear that the mean of the post test was higher than that of the pre test. The difference between the two means was $2.50(\mathrm{M} 2-\mathrm{M} 1)$. It indicates that the treatment was effective. To make the analysis more reliable the writer analyzed it by using $t$-test formula (Arikunto:2002:278).

### 4.3 Test of Significance

After getting the $t$-value, the writer consulted the critical value on the $t$-table to check whether the difference was significant or not. Before the experiment was conducted, the level of significance to be used in the experiment had been divided first. For this experiment writer used the $5 \%(0.05)$ alpha level of significance as usual used in psychological and educational research.

The number of subjects in this experiment was 35 with degree of freedom (df) 74. The critical value with the degree of freedom 74 at the $5 \%$ alpha level of significance is 1,99 . The t -value of pre-test is lower than the critical value. So that
it can be concluded that there is no significant difference of pre-test result between experimental and control groups. While t -value of post-test is higher than the critical value because $t_{0}(5.567)$ is higher than the $t_{t}(1.67)$.

It can be concluded that there is significant difference of post-test results between experimental and control groups. Therefore, the null hypothesis that "there is no significant difference of students' achievement in mastering English words (vocabulary) between those taught with and without alphabet game is rejected". On the other hand, this study suggests improving students' English words (yocabulary) using alphabet game is an effective way.

### 4.4 Discussion of the Research Findings

The objective of this study was to know if there was an effect of using alphabet game in teaching English words (vocabulary) to the vocabulary mastery achieved by the year seven students of SMP N 34 Semarang in the academic 2009/2010.

In the pre-test the average score of the experimental group was 55.19 , while in the post-test the average score of the experimental group was 82.12. Meanwhile PERPUSTAKAAN
the pre-test the average score of the control group was 50.90 , whereas the post-test the average score of the control group was 66.39 . Although, it showed a slight difference between the two means, the result showed that the post-test was better than pre-test.

According to the convention level of achievement, the result of teaching vocabulary by using alphabet game was excellent, the average score was 82.18 .

To check the significance effect of the treatment, the writer analyzed by using t -test formula. The result of the t -test was 5.567 . The writer consulted the critical value on the $t$-table using the $5 \%(0.05)$ alpha level of significance and 74 degree of freedom which was 1.67 . Since she obtained $t$-value was higher than the critical value on the table (5.567>1.67), the difference was statistically significant. It means that there was a significant difference between the way difference of the teaching English words (vocabulary) after and before using alphabet game.


## CHAPTER V <br> CONCLUSION AND SUGGESTION

In this chapter, the writer explains the conclusion and suggestion, which elaborates the result of the research and data analysis. Here the writer gives the conclusion and the suggestion.

### 5.1 Conclusion

The result of the study shows that after the treatment, there is a difference in the students' achievement in learning vocabulary (English words) between students taught by using alphabet game and those taught using conventional strategy.

The two groups are in the same level. Meanwhile, the final result shows that the students' score improved if they were taught by using alphabet game than those who were taught by conventional strategy. The result of the experimental group is 82.12 and the control group is 66.39 .

Teaching vocabulary by using alphabet game has many advantages. Based on the writer's experience during the research, the use of alphabet game as a technique in teaching English words (vocabulary) can motivate the students in learning English. The students are also interested in playing alphabet game while
teaching learning process. They also feel excited when learning English (vocabulary) by using a new technique that is rarely used by their teacher. Most students like to play a game, what kinds of games are. The game itself will create the learning atmosphere funnier and more interesting. So the students are easier to receive the lesson (the material of the study) by using this game in teachinglearning process.

However, we all know that every strategy has limitation. Teaching vocabulary by using alphabet game has also its weaknesses, such as it spends money to prepare the materials, on the other hand it needs a lot of time for searching the suitable material.

Based on the result of the test in the previous chapter, it can be concluded:
(1) The result of the study shows that after the treatment, there is a difference in the students' achievement in learning English words (vocabulary) by using alphabet game than by using conventional strategy. The final result shows that the students' English words (vocabulary) improved better if they were taught by using alphabet game than those who were taught by using conventional strategy, The result of the experimental group is 82.18 and the control group is 66.39 .
(2) The result of the calculation using $t$-test is $5.567>1.67$. The result of the study shows that after treatment given there is a significant difference of the students' achievement in learning English words (vocabulary) by using alphabet game than by using conventional strategy. From this statement, it is said that alphabet game is effective enough to be used in improving
students' mastery in English words (vocabulary). Thus, the alphabet game can be used as an alternative technique in improving students' mastery in English words (vocabulary).

### 5.2 Suggestion

From the advantages of teaching English words (vocabulary) by using alphabet game to junior high school students, the writer would like to give some suggestions as follows:
a. Using alphabet game in teaching English words is recommended for the English teachers, especially for the junior high school teachers to attract the students' interest and motivation in learning English.
b. Students should do much practice in learning English words (vocabulary). The use of alphabet game in teaching English words (vocabulary) is not only applied in the classroom teaching-learning process but also in daily activity.
c. The program should be done regularly and continuously.
d. For the next researchers, they can make this study as their milestone to conduct other research on the same field. They may use true experimental research design to know whether the method is more effective or not.

## BIBLIOGRAPHY

2006. Kurikulum Tingkat Satuan Pendidikan, Bahasa Inggris SMP/MTs. Departemen Pendidikan Nasional, Jakarta, Indonesia

Agoestyowati, Redjeki. 2007. 102 English Games. Jakarta: PT Gramedia Pustaka.
Arikunto, Suharsimi. 2002. Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: PT Rineka Cipta.
---------------- 1995. Prosedur Penelitian: Suatu Pendekatan Praktek. Jakarta: Rineka Cipta.

Best, John. W. 1981. Research in Education (4 $4^{\text {th }} \mathrm{ed}$ ). New Jersey: Prentice-Hall, Inc.

Brand, M. 2004. Word-Savvy: Integrating Vocabulary, Spelling and Word Study, Grades 3-6. Portland, ME: Stenhouse Publishers.

Brown, H. Douglas. 2004. Language Assessment, Principles and Classroom Practices. USA. Longman.

Finocchiaro, Mary. 1974. English as a Second Language from Theory to Practice. New York: Regent Publishing Company. Inc.

Freeman, D.L. 2000. Techniques and Principles in Language Teaching. Oxford: Oxford University Press.

Gay, L. R. 1987. Educational Research. Competencies for Analysis and Application. Third edition. Columbus: Merril Publishing.

Gerlach \& Ely. 1980. Teaching and Media: A Systematic Approach. Second Edition. Englewood Cliffs New Jersey: Arizona State University. Prentice-Hall Inc.

Gronlund, N.E. 1981. Constructing Achievement Test. New York: Macmillan.
Hadi, Sutrisno. 1980. Statistik II. Yogyakarta: Yayasan Penelitian Fakultas Psikologi. Universitas Gajah Mada.

Harmer, Jeremy. 1998. How to Teach English: An Introduction to the Practice of English Language Teaching. England: Pearson Educational Ltd.

Harris, D. P. 1969. Testing English as a Second Language. New York: Macmilan.
Heaton. 1975. Writing English Language Tests. England: Longman Group Limited.

Hornby, A.S. 1995. Oxford Advanced Learner's Dictionary of Current English. London: Oxford University Press.

Kerlinger, F. N. 1965. Foundation of Behavior Research. New York: Hott Rinehart, and Winston, Inc.

Linse, Caroline. L. 2006. Practical English Language Teaching: Young Learners. New York, NY: McGraw-Hill Companies.

Longman, 1995. Longman Dictionary of Contemporary English. England: British National Corpus.

Madsen. H. S. 1983. Technique in Testing. New York: Oxford University Press.
Mouly. 1967. Test for Experiment. New York: Mac Millan, Inc.
Nation, I.S.P. 2003. Vocabulary. In D. Nunan (ed), Practical English Language Teaching (D. Nunan ed.). New York, NY: McGraw-Hill, 129-152.

Neufeldt, Victoria. 1995. Webster's New World Collage Dictionary. New York: Macmillan Inc.

Norton, Bonna E. 1980. The Effective Teaching of Language Arts, Columbus: Charles. E. Merrill Publishing Company.

Ramelan. 1992. Introduction to Linguistics Analysis. Semarang: IKIP Semarang Press.

Rixon, Shelaagh. 1981. How to Use Games in Language Teaching. London: The Macmillan Publishers Ltd.

Satria, Dwika Bagus. 2006. The Use of Five Minutes Activity in Improving Students' Vocabulary. A final Project: English Department of UNNES: unpublished.

PERPUSTAKAAN
Sax, Gilbert. 1979. The Foundation of Educational Research. New Jersey, Prentice Hall, Inc.

Scoot, Wendy A. and Ytreberg Lisbeth H. 1990. Teaching English to Children. New York: Longman Inc.

Uberman, A. 1998. The Use of English for Vocabulary Presentation and Revision. Language Teaching Forum. Jan-March Edition. Volume 6 no1. In Manikam, G. H. M. 2009. The Use of Flash Game as a Media to Improve Students Vocabulary. A Final Project: English Department of UNNES. Unpublished Final Project.

Wallace, Michael J. 1982. Teaching Vocabulary. Great Britain Bridles, Ltd.

Webster. 2004. Merriam-Webster's Collegiate Dictionary-Eleventh ed. United States of America.

Wright. Andrew, et. al. 1994. Games for Language Learning. Cambridge: Cambridge University Press.

Ying, Y. S. 2001. Acquiring Vocabulary through a Context-Based Approach. English Teaching Forum: A Journal for the Teacher of English outside the United States. 39 (1), 18-21.

## Website

Beltran, M. S. http:// www.eHow.com/html [accessed on 30/03/2009]
David and Tom. 1993. http://www.exchanges.state.gov/tesl/vol 6/qa apr 93.html [accessed 15/03/2009]. In Purwaningsih, R. B. 2008. The Use of Games to Improve Students' Mastery in English Spelling. A Final Project: English Department of UNNES. Unpublished Final Project.

Pennington,Mark. http://ezinearticles.com/English-Teaching-StrategiesEspecially-for-Teacher) [accessed on 24/02/2009]
http://www.allwords.com/word-vocabulary.html [accessed on 15/04/2009]
http://www.brainyquote.com [accessed on 15/04/2009]
http://www.wikipedia.com [accessed on 15/04/2009]

PERPUSTAKAAN


## Appendix 1

| TRY OUT |  |
| :---: | :--- |
| VOCABULARY TEST |  |
| Subject | $:$ English |
| Class | $:$ VII |
| Semester | $:$ I |
| Time | $: 40$ minutes |

Choose the right answer on your paper by crossing (X) a, b, c, or d. (Pilihlah jawaban yang tepat dengan memberi tanda silang (X) pada huruf a, b, c, atau d pada lembar jawaban)

1. Teacher : Good ...., how are you today?

Students: Good morning, Miss.
a. night
b. morning
c. evening
d. afternoon
2. Tania : Can I ..... my self? My name is Tania.

Susan : I am Susan.
a. introduce
b. remind
c. answer
d. remember
3. Elephant is a .... Animal.
a. thick
b. thin
c. tall
d. big

4. Tania is a .... girl. She has blonde hair and pointed nose.
a. handsome
b. beautiful
c. good
d. patient
5. We can get a lot of information by watching
a. radio
b. library
c. television
d. newspaper
6. Richard buys some cakes and bread in the ...
a. bakery
b. florist
c. grocery
d. butcher
7. You can sweep the floor with a ....
a. broom
b. mop
c. duster
d. map
8. I will go to the .... to buy the medicine.
a. dentist
b. veterinarian
c. drugstore
d. surgeon
9. At home, you can keep the car in the...
a. bedroom
b. bathroom
c. garage
d. kitchen
10. Today is Monday, tomorrow is.
a. Wednesday
b. Friday
c. Thursday
d. Tuesday
11. This month is July, last month was...
a. February
b. June
c. March
d. April
12. Yesterday was Saturday, today is....
a. Sunday
b. Thursday
c. Friday
d. Monday
13. Pencil is used for....
a. cutting PERPUSTAKAAN
b. erasing
c. calling
d. writing
14. If you like you can go to the river to get the fish.
a. sport
b. singing
c. fishing
d. hunting
15. The colors of our hair is usually ....
a. green
b. blue
c. black
d. pink
16. The colors of elementary school students' uniform are ....
a. red and green
b. red and white
c. red and black
d. red and blue
17. My mother is baking the cake in the kitchen. Her hobby is ....
a. hunting
b. chatting
c. climbing
d. cooking
18. The color of good teeth is
a. white
b. black
c. yellow
d. red
19. Last month was July, next month is
a. August
b. October
c. May
d. September
20. Before sleeping, we must ... our teeth
a. sweep
b. brush
c. mop
d. cook

## B. Fill in the blank spaces using the words given in the box!

My English Teacher
This is Mr. Hamid. Mr. Hamid is a teacher. He works at (1) .... . He (2) .... every day. He teaches English. The students like him because he is (3) .... . He teaches patiently and explains (4) .... well and clearly. He never comes (5) .... to school.

Mr. Hamid always prepares (6) .... before he gives the lesson. The materials are made based on the curriculum which is issued by Department of National Education. Sometimes, he makes some item test to test his students. This is done to know the ability of the students in (7) ..... the lesson.

Mr. Hamid is teaching now. He is teaching English in Class VII. His students pay attention carefully to his (8) .... . According to him, English is (9)..... Because it is an international language. If we know English, our world will be wider. We can (10) ....with other people in different language in other countries.


THE ITEM ANALYSIS OF THE TRY OUT TEST

| N | Co | Item Number |  |  |  |  |  |  |  |  | Item Number |  |  |  |  |  |  |  |  | Item Number |  |  |  |  |  |  |  |  | Item Number |  |  |  |  |  |  |  |  | Item Number |  |  |  | Y | $\mathrm{Y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc$ | de | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |  | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |  |  |
| 1 | -TO <br> -05 <br> TO | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 38 | 144 |
| 2 | -03 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 38 | 144 |
| 3 | -10 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 37 | 1369 |
| 4 | -TO <br> -33 <br> 10 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 36 | 1296 |
| 5 | -TO <br> -35 <br> T0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 34 | 1156 |
| 6 | -18 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 33 | 1089 |
| 7 | -TO <br> -13 <br> 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  |  |  | 1 | 1 |  |  |  | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 33 | 1089 |
| 8 | -16 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  |  |  | 1 | 0 |  |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 33 | 1089 |
| 9 | TO | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |  |  |  | 1 | 1 | 1 |  | [/1 |  |  | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 31 | 961 |
| 1 | TO | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |  |  |  |  | 1 | 1 | 1 | 1 | 1 |  |  |  | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 31 | 96 |
| 1 | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |  |  |  | 1 | 1 | 1 | 1 | 1 |  |  | 1 |  | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 31 | 961 |
| 2 | -27 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |  |  | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 30 | 900 |
| $1 \begin{aligned} & 1 \\ & 3\end{aligned}$ | TO | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |  | 1 | 0 |  | 1 | 1 | 0 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 30 | 900 |
| 4 | - | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 30 | 900 |
| 5 | -28 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |  | 1 | 0 | 0 |  | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 29 | 84 |
| 6 | -20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |  |  | 1 | 1 | 0 |  | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 29 | 84 |
| 7 | -24 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 29 | 84 |
| 1 | TO | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 0 | 0 |  | 1 |  | 1 | 0 |  | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 29 | 841 |
|  | -07 |  | 1 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  | 1 |  |  |  | 1 |  |  |  |  |  |  |  | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 29 | 841 |
| 9 | -22 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |  | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 29 | 84 |
| 2 | -29 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 29 | 84 |
| 2 1 1 | TO | 1 | 1 | 1 |  | 0 | 1 | 0 |  | 1 |  | 0 |  | 1 |  | 1 |  |  |  |  |  | 0 | 1 |  |  |  |  |  | 1 | 1 | 1 |  |  | 1 | 1 | 1 | 0 | 1 | 0 | 1 |  | 28 |  |
| 2 | -06 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |  | 1 |  |  | 1 |  | 1 |  |  |  |  |  | 0 |  | 1 |  |  | 1 | 1 |  | 0 | 1 |  | 1 |  | 1 |  |  | 1 | 28 | 784 |
| 2 | -09 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |  | 1 | 1 | 0 |  | 1 | 0 | 1 | 1 | 0 | 1 | 1 |  | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 28 | 784 |
| 3 | -38 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | $E_{1}$ |  | To | 1 | $\mathrm{Na}_{1}$ | 1 | 0 |  | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 28 | 784 |
| 4 | -39 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |  | 1 | 1 |  |  | 0 |  | $-1$ | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 26 | 676 |
| 2 | ${ }_{\text {TO }}^{\text {TO }}$ | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |  |  |  |  | 1 | 1 |  |  |  | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 25 | 625 |
| 2 | -30 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |  | 0 | 1 |  | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 24 | 576 |
| 2 | TO | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 23 | 529 |
| 2 | TO |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | -34 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 23 | 529 |
| ${ }_{9}$ | -23 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 23 | 52 |
| 3 | TO | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 18 | 324 |
| 3 | то |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | -04 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 18 | 324 |
| 2 | -36 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 17 | 289 |
| 3 | TO | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 16 | 256 |
| 4 | TO |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | -02 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 16 | 256 |
| - | -25 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 16 | 256 |



| Ite <br> m <br> nu <br> mb <br> er |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 |  | 3 | 4 | 5 | 6 |  | 7 | 8 | 9 | 0 | $\begin{array}{\|l\|} \hline 1 \\ 1 \\ \hline \end{array}$ |  |  | 1 | $\begin{aligned} & 1 \\ & 4 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} 1 \\ 5 \\ \hline \end{array}$ | $\begin{aligned} & 1 \\ & 6 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} 1 \\ 7 \\ \hline \end{array}$ |  | $\begin{array}{\|l\|} \hline 1 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 2 \\ 0 \end{array}$ | $\begin{array}{\|l\|} \hline 2 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 2 \\ 2 \\ \hline \end{array}$ | $\begin{aligned} & 2 \\ & 3 \\ & \hline \end{aligned}$ |  |  | $\begin{array}{\|l\|} \hline 2 \\ 6 \end{array}$ | $\begin{aligned} & 2 \\ & 7 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 3 | 3 | 3 | $\begin{array}{\|l\|} \hline 3 \\ 5 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 6 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 7 \\ & \hline \end{aligned}$ | 3 3 <br> 8  | 4 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 |  |
| 38 | 3 |  | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} 3 \\ 8 \\ \hline \end{array}$ | $\begin{array}{r} 3 \\ 8 \\ \hline \end{array}$ | $\begin{array}{r} 3 \\ 8 \\ \hline \end{array}$ |  | 3 | $\left\|\begin{array}{l} 3 \\ 8 \end{array}\right\|$ | $8$ | 8 | [18 |  |  | 3 | 0 | $\begin{array}{\|l\|} 3 \\ 8 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 8 \\ & 8 \end{aligned}$ | $\begin{array}{\|l\|} 3 \\ 8 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 8 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 8 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 8 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | $\left.\begin{array}{\|l\|} 3 \\ 8 \end{array} \right\rvert\,$ | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 3 \\ 8 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | 0 | 3 | 3 | 8 | 8 | 3 8 | $\begin{aligned} & 3 \\ & 8 \\ & 8 \end{aligned}$ | $8$ | $8$ | 3  <br> 8  <br> 8 8 | 3 | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \mathrm{\# R} \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \#R |
| 38 | 8 |  |  | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 8 \\ & \hline \end{aligned}$ | 8 |  | 3 | 8 | - 3 | - | [1 |  |  | 3 | 8 | 3 8 | 3 | 3 | 3 | 3 8 | 0 | 3 8 8 | $\left.\begin{aligned} & 3 \\ & 8 \end{aligned} \right\rvert\,$ | $\begin{aligned} & 3 \\ & 8 \end{aligned}$ | $\begin{aligned} & 3 \\ & 8 \end{aligned}$ | 0 | 3 | 3 8 | 3 | 3 | 8 | 3 3 <br> 8 8 | - 3 | 3 | 3 | 3 | 3 | 3  <br> 8 3 <br> 8 8 | 3 | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R | \#R | \#R EF $!$ | \#R EF $!$ | \#R | \#R |
| 37 | 3 |  | 0 | 3 7 | $\begin{aligned} & 3 \\ & 7 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 7 \\ & \hline \end{aligned}$ |  |  | 3 | - 3 | 3 |   <br> 3 3 <br> 7  |  <br> 3 <br> 3 <br> 7 | 7 | 3 | 7 | 3 | 3 | 3 | 3 | $\begin{array}{\|l} 3 \\ 7 \end{array}$ | $\begin{array}{\|l} 3 \\ 7 \end{array}$ | $\begin{aligned} & 3 \\ & 7 \end{aligned}$ | $\begin{aligned} & 3 \\ & 7 \end{aligned}$ | $\begin{array}{\|l\|} \hline 3 \\ 7 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 7 \\ \hline \end{array}$ | 0 | 3 7 | $\begin{aligned} & 3 \\ & 7 \\ & \hline \end{aligned}$ | 3 | 3 7 7 | 7 | 7 | 3 | 7 | 3 7 | 0 | 3 | 3 3 <br> 7 7 | 3 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \#R |
| 36 | 3 |  | 3 | $\begin{array}{\|l\|} \hline 3 \\ 6 \\ \hline \end{array}$ | 6 | 3 |  | 0 | 3 | 3 | 3 |   <br> 3 3 <br> 6 6 |   <br>  3 <br> 6  <br> 6  | 3 | 3 | 3 | 3 | 3 6 | 0 | 3 6 | $\begin{array}{\|l\|} \hline 3 \\ 6 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 6 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 6 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 6 \\ \hline \end{array}$ | 3 | 3 | 3 | 3 |  | $\begin{aligned} & 3 \\ & 6 \\ & \hline \end{aligned}$ | 3 | 3 | $\begin{array}{ll}3 & 3 \\ 6 & 6\end{array}$ | 3 6 | 3 | 3 6 | 3 6 | $\begin{aligned} & 3 \\ & 6 \end{aligned}$ | 3 | 3 | $\begin{array}{\|l\|} \hline \# R \\ \hline \text { EF } \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \hline \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \hline \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { ! } \\ \hline \text { ER } \\ \vdots \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c\|} \hline \# R \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \# |
| 34 | 3 |  |  | $\begin{aligned} & 3 \\ & 4 \end{aligned}$ | 0 | 3 |  | 3 | $\begin{aligned} & 3 \\ & 4 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 3 \\ 4 \end{array}$ | 3 | 3 3 <br> 4 4 | 3 4 | 0 | 3 | 3 | 0 | 3 4 | 3 4 |  |  |  | $\begin{array}{\|l\|} \hline 3 \\ 4 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 4 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 3 \\ 4 \\ \hline \end{array}$ | 0 | 0 | 3 4 | 0 | $\begin{aligned} & 3 \\ & 4 \end{aligned}$ | 3  <br> 4  | 4 | 3 | 4 | 3 | 3 4 | 3 4 | $\begin{aligned} & 3 \\ & 4 \\ & \hline \end{aligned}$ | 3 3 <br> 4 4 | 3 | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \hline \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \#R | \# |
| 33 | 3 |  | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | 0 | 3 |  |  | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $3$ | 3 | 3 |  |  |  | 0 | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | 0 | 0 | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $3$ | $3$ | $3$ | 3 3 3 | 3 | 0 | $\begin{array}{\|l\|} 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | - | $\begin{array}{r} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & \# R \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R EF ! | \#R EF ! | \# |
| 33 | 3 3 |  | $3$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ |  | 3 | 3 | 3 | 3 |   <br> 3 3 <br> 3  |  | $3$ | 3 | 0 | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | 3 3 | $\begin{array}{\|l\|} \hline 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ |  | 0 |  | $3$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | 3 | 3 | 0 | 3 | 0 | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ |  | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | 3  <br> 3 3 <br> 3  | 3 | $\begin{gathered} \hline \text { \#R } \\ \mathrm{EF} \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \# R \\ E F \\ ! \end{gathered}$ | $\begin{aligned} & : ~ \\ & \hline \text { ER } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & ! \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \mathrm{EF} \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | \#R | \#R | \#R | \#R | \#R | \# |
| 33 | 3 3 |  |  | 0 | 0 | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ |  |  | $\begin{array}{\|l\|} 3 \\ 3 \end{array}$ | $3$ | 3 |   <br> 3 3 <br> 3 3 |  | $3$ | 3 | 0 | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $\left\|\begin{array}{l} 3 \\ 3 \end{array}\right\|$ | $\begin{array}{\|l\|l\|} \hline \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | 0 | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{array}{\|l\|} \hline 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ |  | $\begin{array}{\|l} 3 \\ 3 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ |  |  | 3 | 3 <br> 3 <br> 3 | 3 | $\begin{aligned} & 3 \\ & 3 \\ & \hline \end{aligned}$ | 0 |  | 3 <br> 3 <br> 3 | 3 | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \dot{\text { \#R }} \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | EF | EF | \#R | \#R | $\stackrel{\text { \#R }}{\text { EF }}$ |
| 31 | 3 1 |   |  | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ |  |  | 3 1 | 3 1 1 | - 3 | 3 <br> 1 | 10 |  <br>  |  | 3 1 | 0 | 0 |  |  | 0 | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ |  | 0 | $3$ | 3  <br> 1  <br>   <br>   |  | 1 | $\begin{aligned} & 3 \\ & 1 \\ & 1\end{aligned}$ | 3 |  | 0 | $3$ |   <br>  3 <br> 1  <br> 1  | 3 | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \hline \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|c} \text { \#R } \\ \hline \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \hline \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \mathrm{EF} \\ ! \end{gathered}$ | EF | EF | EF | EF | \#R | \#R | \# |
| 31 | 3 1 |   <br> 3 3 <br> 1 1 | $\begin{aligned} & 3 \\ & 1 \end{aligned}$ | 0 | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 1 \end{aligned}$ | 3 | 0 | $\begin{aligned} & 3 \\ & 1 \end{aligned}$ |  | 1 <br> 3 <br> 1 | 10 |  <br>  <br>  <br> 3 <br> 1 |  | 1 | 0 | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ |  |  |  | $\begin{array}{\|l\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ | 0 | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ |  |  | 3 | 3 | 1 | 1 | 3 | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ |  | 3 1 | 1 | 3 1 | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline! \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \#R | \# $\begin{gathered}\text { \# } \\ \text { EF } \\ !\end{gathered}$ |
| 31 | 3 1 |  | $3$ | $\begin{array}{\|l\|} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{l\|l} 3 & 3 \\ 1 & 1 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ |  | 3 1 1 | 0 | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ | 1 | 0 | 0 |  | 0 | 0 | 0 | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ |  | $3$ | $\begin{array}{\|l\|} \hline 3 \\ 1 \\ \hline \end{array}$ | $1$ | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ | 3 | 3 | 3 3 <br> 1 1 | 0 | 3 | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 1 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 1 \\ & \hline \end{aligned}$ |   <br>  3 <br> 1  <br> 1  | 3 | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF ! | \#R | \#R | \#R | \#R | \#R | \#R | \#R |
| 30 | 3 |  | 0 | 0 | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ |  | 0 | 0 | $0$ | 0 |   <br> 3  <br> 0  <br> 0  |  | 3 | 0 | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | $\begin{array}{\|l} 3 \\ 0 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | $\begin{array}{\|l\|} \hline 3 \\ 0 \\ \hline \end{array}$ | $\begin{array}{\|l\|l} 3 \\ 0 \\ \hline \end{array}$ | $\begin{array}{\|l\|l} 3 \\ 0 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 0 \\ \hline \end{array}$ | $\left.\begin{aligned} & 3 \\ & 0 \end{aligned} \right\rvert\,$ | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | 0 |  | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 0 | 0 | 0 | 0 | 0 | $\begin{array}{\|l\|} 3 \\ 0 \\ \hline \end{array}$ | 0 | $0$ | 0 | 3 | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \mathrm{\# R} \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \# EF |
| 30 | 3 | 3 | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ |  | 0 | 0 |  | 0 | (1) | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 0 | 0 | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | $\left.\begin{array}{\|l\|} 3 \\ 0 \end{array} \right\rvert\,$ | 0 | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | 0 | $\left.\begin{aligned} & 3 \\ & 0 \end{aligned} \right\rvert\,$ | $\left.\begin{aligned} & 3 \\ & 0 \end{aligned} \right\rvert\,$ | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | 0 | $\begin{array}{\|l\|} 3 \\ 0 \\ \hline \end{array}$ | $0$ | $0$ | 3 |  | 0 | 0 | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 0 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 0 | 0 | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R | \#R | \#R | \#R | \#R EF ! | ER |
| 30 | 0 |  | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | 0 | 0 |  |  | 0 | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $0$ | 0 |  | - | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 0 | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 3 \\ 0 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 3 \\ 0 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 3 \\ 0 \\ \hline \end{array}$ | 0 | 0 | $\begin{array}{\|l\|} \hline 3 \\ 0 \\ \hline \end{array}$ | $\begin{array}{\|l} 3 \\ 0 \\ \hline \end{array}$ | $\begin{aligned} & 3 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{array}{\|l\|} \hline 3 \\ 0 \\ \hline \end{array}$ | 0 | $\begin{aligned} & 5 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 3 \\ 0 \\ \hline \end{array}$ | 0 | $\begin{aligned} & 3 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | $0$ | 0 | 0 | 3 | $\begin{array}{\|l\|} 3 \\ 0 \\ \hline \end{array}$ | 0 | 0 | 0 | 3 | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \hline \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | \#R | \#R | \#R | \#R | \#R | E |
| 29 | 2 |  | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | 0 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ |  | 0 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | $9$ | 9 | 2 | - 2 | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | 9 | 0 | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | 0 | $\begin{array}{\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | 0 | 0 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | $2$ | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | 9 | $9$ | 9 | 9 | 2 | 0 | 0 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | 9 | 2 | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \hline \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R | \#R | \#R |
| 29 | $\begin{aligned} & 9 \\ & 9 \end{aligned}$ |  | $2$ | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | $\begin{array}{r\|r} 2 \\ \hline & 2 \\ 9 & 9 \\ \hline \end{array}$ |  |  | 9 | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $9$ | 9 |  |  |  | 9 | 0 | 0 | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | 0 | 0 | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | 0 | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ |  | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ |  | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | $9$ |  | 9 | 9 | 0 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | 9 | 2 | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF ! d | \#R EF ! | \#R | \#R | \#R | \#R | \#R | \#R | \# |
| 29 | 2 |  | $9$ | 0 | 0 | 2 | 2 | 2 | 2 | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | 2 | 2  | 20 | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | 9 | 0 | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{r} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ |  | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | 0 | 0 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | 9 | 0 | 2 9 | - 2 | 2 | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | 0 | 0 | 9 | 2 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R <br> EF <br> ! | \# $\begin{gathered}\text { \# } \\ \text { EF } \\ !\end{gathered}$ |
| 29 | 2 |  | 9 | 0 | 0 | 2 | 9 | 9 | 2 | 9 | 9 |  | \|l| | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | 9 | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | 2 | 2 | 2 | 0 | 0 | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|} 2 \\ 9 \\ \hline \end{array}$ | $\begin{array}{\|l} 2 \\ 9 \\ \hline \end{array}$ | 0 | 2 | $\begin{aligned} & 2 \\ & 9 \\ & \hline \end{aligned}$ | 0 | $\begin{aligned} & 2 \\ & 9 \end{aligned}$ | 2 | 0 | 9 | 9 | 2 | 2 | 0 | 9 | 0 | 0 | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R | \#R | \#R | \#R | \#R | \#R EF ! | \#R |
| 29 | 2 | 2 | 2 | 0 | 2 | 2 |  | 2 | 2 | 2 | 2 |  | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R | \#R |  |




|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 1 | 1 1 | 2 | 3 | 4 | 5 | 1 | 7 | 11 | 9 | - 2 | 2 | 2 | 3 | 2 <br> 4 | $\begin{array}{\|l\|} \hline 2 \\ 5 \\ \hline \end{array}$ | $\begin{array}{l\|l} \hline 2 & 2 \\ 6 & 7 \\ \hline \end{array}$ | 8 | 9 | $\begin{array}{\|l\|} \hline 3 \\ 0 \\ \hline \end{array}$ | $3$ | 3 | 4 | $\begin{array}{\|l\|} \hline 3 \\ 5 \end{array}$ | $\begin{aligned} & \hline 3 \\ & 6 \end{aligned}$ | 8 | 3 9 | 4 <br> 0 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | $1{ }_{1}$ | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \mathrm{JR} \\ & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R EF $!$ |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \hline \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { ER } \\ ! \\ \hline \end{gathered}$ |  |
|  | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \dot{\prime}+ \\ & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \dot{\prime} \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { : } \\ & \hline \text { ER } \\ & \mathrm{EF} \end{aligned}$ | \#R EF $!$ |
|  | 1 | 1 | 1 | 1 | 0 | 1 | 0 | $1{ }_{1}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $E F$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | \#R <br> EF <br> ! |
|  | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 11 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |  | 1 | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { :R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { in } \\ & \hline \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \end{gathered}$ | EF | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & : \\ & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R <br> EF <br> $!$ |
|  | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | $1 \begin{aligned} & 1 \\ & 1\end{aligned}$ | 1 | 1 | 1 | 1 | 0 | 0 |  |  |  |  | , | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { : } \\ \hline \text { ER } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | EF | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} ! \\ \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | \#R <br> EF <br> ! |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |  |  |  |  |  | 0 | 1 | 0 | 1 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \# R \\ & E F \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R <br> EF <br> ! |
|  | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1.1 |  | 1 |  |  | 0 | 1 | 1 | 0 | 0 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | EF | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | \#R |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |  | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \# R \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R |
|  | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |  | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { \#R } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \hline \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF ! ¢ |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 01 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & E F \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \end{gathered}$ | \#R | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF ! ¢ |
|  | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{EF} \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \hline \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & E F \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF $!$ |
|  | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |  | 1 | 1 | $\begin{gathered} \mathrm{EF} \\ ! \end{gathered}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l\|} \hline \# R \\ E R \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|c} \hline \text { ! } \\ \hline \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{gathered} \mathrm{EF} \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \# R \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R EF $!$ |
| 4 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 10 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | $\begin{aligned} & 7 \\ & 0 \end{aligned}$ | 0 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & ! \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R EF | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { \#R } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { : } \\ & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | \#R EF $!$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | \#R EF ! Pr |
| 5 | 1 | 1 | 1 | 0 | 1 |  | 0 | 11 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 11 | 1 | 1 |  | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | \#R EF ! Pr | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R <br> EF <br> $!$ |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 10 | 1 | 1 | 1 | 1 | 0 | 10 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { \#R } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { ER } \\ & \hline \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R EF I |
| 7 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & ! \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \# \mathrm{R} \\ & \mathrm{EF} \end{aligned}$ | \#R | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF $!$ |
| 8 | 1 | ${ }_{1}$ | 1 | 0 | 0 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 10 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | $\begin{aligned} & \dot{\prime} \\ & \hline \text { ER } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \\ \hline \end{array}$ | $\begin{aligned} & \text { : R } \\ & \hline \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \mathrm{EF} \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & i \\ & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ \hline \end{gathered}$ | $\begin{aligned} & \dot{\prime} \\ & \hline \text { ER } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \hline \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \# R \\ & E F \end{aligned}$ | \#R | ER | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { ER } \end{array}$ | \#R | \#R <br> EF <br> $!$ |
| 9 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 11 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 11 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|l} \hline \# R \\ \text { EF } \end{array}$ | $\begin{array}{\|c} \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{gathered} \mathrm{\# R} \\ \mathrm{EF} \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R EF ! | \#R | \#R | \#R | \#R <br> EF <br> $!$ |
|  |  | 1 | 1 | 0 | 0 |  | 1 | 11 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  | 1 | 1 |  | 1 |  |  |  |  | 0 |  |  | 0 | 1 | 0 |  |  | 0 |  |  |  | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \mathrm{EF} \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R |


| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 11 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 10 | 1 |  | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c\|} \hline \# R \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c\|} \hline \# \mathrm{R} \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \mathrm{EF} \\ ! \end{array}$ | \#R EF | ER | F | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 11 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 11 | 10 | 0 |  | 1 | 0 | 1 | 1 | 1 | 0 | 10 |  |  | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \dot{E F} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | EF | \#R | EF | \#R | \#R |
| 3 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 11 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 11 | 1 | 11 | 11 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | - 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \hline \text { EF } \end{aligned}$ | $\begin{aligned} & \text { in } \\ & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | EF | EF | \#R | \#R EF ! 1 | \#R |
| 4 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 11 | 1 | 11 | 11 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | \#R | EF | \#R | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R |
| 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 10 | 0 | 0 | 10 | 1 | 0 | 1 | 0 | 1 | 0 | 10 | 01 | 1 | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R | EF | EF | \#R EF ! | \#R |
| 6 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 11 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 10 | ${ }^{1}$ | 1 |  | 1 | 0 | 1 | 0 |  |  |  |  | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & ! \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & ! \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | EF | EF | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | \#R |
| 7 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 11 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 10 |  |  | 1 |  | 1 | 0 |  |  | 10 | - 1 | 1 |  | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \text { ! } \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{c\|} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R | EF | EF | \#R | \#R EF ! ¢ | \#R EF $!$ d |
| 8 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 10 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |  |  | 1 | 0 | 1 | 0 | 1 | 0 | 0 | ${ }_{0} 1$ |  | \# | $\begin{gathered} \mathrm{EF} \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF $!$ | \#R | \#R | \#R | \#R EF $!$ | \#R |
| 2 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |  |  | 00 |  |  | 0 | 0 | 0 | 1 | 1 | 1 |  | 10 | 1 | 1 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \text { ! } \\ \hline \end{array}$ | EF | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \hline \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & ! \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | \#R | EF | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R | \#R |
| 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |  | 0 | 00 | 01 | 1 | 0 | 1 | 0 | 1 | 0 |  | 0 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \dot{\text { \#R }} \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \dot{\#}, \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \dot{\#}, \\ & \text { ER } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { EF } \\ ! \end{gathered}$ | EF | EF | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R |
| 3 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |  |  | 0 | 10 | 0 | 0 | 1 | 0 | 1 | 0 |  | 0 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \\ ! \\ ! \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { \#R } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \mathrm{EF} \\ ! \end{gathered}$ | EF | EF | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | EF | \#R |
| 2 | 1 | 1 | 1 | 10 | 0 | 1 | 1 | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 00 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 0 | 0 | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R | \#R | EF | \#R | \#R EF $!$ | \#R EF ! |
| 3 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 01 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 0 | \#R | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \hline \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ \text { ! } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \end{gathered}$ | \#R | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | EF | \#R | \#R EF $!$ ! | \#R |
| 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 10 | 0 | 00 | 0 | 1 | 0 | 1 | 1 |  | 0 |  | 0 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & E F \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | \#R | \#R | \#R | \#R EF ! | \#R |
| 5 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |  |  | 1 | 1 | 0 | 0 | 1 | 1 | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & \text { ! } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|l} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { : } \\ & \hline \text { ER } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { iR } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | EF | EF | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R |
| 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 00 | 01 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 01 | 1 | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{array}{\|l\|} \hline \text { \#R } \\ \text { EF } \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{aligned} & \text { : } \\ & \text { ER } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \dot{\prime} \\ & \hline \text { ER } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#R | \#R | \#R <br> EF <br> $!$ | \#R |
| 7 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 00 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 01 | 0 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \text { EF } \\ ! \end{array}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R EF ! ¢ | \#R | \#R | \#R | \#R EF ! | \#R |
| 8 | 0 |  | 0 | 0 | 1 | 0 | 1 | 11 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 00 | 0 | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { \#R } \\ \mathrm{EF} \\ ! \\ \hline \end{array}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \text { EF } \\ ! \end{gathered}$ | \#R EF ! 1 | \#R | \#R | \#R | \#R EF $!$ | \#R |
| 9 | 0 | - | 0 | 0 | 1 | 0 | 0 | , | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 01 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 01 | 0 | $\begin{gathered} \text { \#R } \\ \text { EF } \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & \text { n } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{gathered} \hline \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \\ & \text { n } \end{aligned}$ |  | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | \#R | \#R | \#F | \#F | \#R EF $!$ | \#R |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \text { ER } \end{aligned}$ | $\begin{gathered} \text { \#R } \\ \mathrm{EF} \end{gathered}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \text { EF } \end{aligned}$ | $\begin{aligned} & \hline \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{aligned} & \text { \#R } \\ & \mathrm{EF} \end{aligned}$ | $\begin{gathered} \dot{\prime} \\ \hline \text { \#R } \\ \text { EF } \end{gathered}$ | $\stackrel{\text { \#R }}{\text { EF }}$ | $\stackrel{\text { \#R }}{\text { EF }}$ | \#R | \#R | \#R | \#R |

## Appendix 3

The Computation of Item Validity Test

## Formula:

$\mathrm{r}_{\mathrm{xy}}=\frac{\mathrm{N} \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left.\left\{N \sum X^{2}-(\Sigma X)^{2}\right) \mathrm{N} \sum \mathrm{N}^{2}-(\Sigma Y)^{2}\right\}}}$

## Criteria

The item is valid if $r_{x y}>r_{\text {table }}$ of counting the validity of item number 2, and for the other item
The following is the example of counting the validity of item number 2 , and for the other items
will use the same formula.
will use the same formula.

| No | Code | X | Y | $\mathrm{X}^{2}$ | $\mathrm{Y}^{2}$ | XY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | TO-05 | 1 | 38 | 1 | 1444 | 38 |


| No | Code | X | Y | X ${ }^{2}$ | $\mathrm{Y}^{2}$ | XY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | TO-05 | 1 | ${ }^{38}$ | 1 | 1444 | 38 |
| 2 | T0-03 | 1 | 38 | 1 | 1444 | 38 |
| 3 | TO-10 | 1 | 37 | 1 | 1369 | 37 |
| 4 | TO-33 | 1 | 36 | 1 | 1296 | 36 |
| 5 | TO-35 | 1 | 34 | 1 | 1156 | 34 |
| 6 | TO-18 | 1 | 33 | 1 | 1089 | 33 |
| 7 | TO-13 | 1 | 33 | 1 | 1089 | 33 |
| 8 | TO-16 | 1 | 33 | 1 | 1089 | 33 |
| 10 | TO-40 | 1 | 31 | 1 | 961 | 31 |
| 10 | TO-12 | 1 | 31 | 1 | 961 | 31 |
| 11 | TO-01 | 1 | 31 | 1 | 961 | 31 |
| 12 | TO-27 | 1 | 30 | 1 | 900 | 30 |
| 13 | T0-08 | 1 | 30 | 1 | 900 | 30 |
| 14 | TO-31 | 1 | 30 | 1 | 900 | 30 |
| 15 | T0-28 | 1 | 29 | 1 | 841 | 29 |
| 16 | TO-20 | 1 | 29 | 1 | 841 | 29 |
| 17 | TO-24 | 1 | 29 | 1 | 841 | 29 |
| 18 | TO-07 | 1 | 29 | 1 | 841 | 29 |
| 19 | TO-22 | 1 | 29 | 1 | 841 | 29 |
| 20 | T0-29 | 1 | 29 | 1 | 841 | 29 |
| 21 | TO-06 | 1 | 28 | 1 | 784 | 28 |
| 22 | TO-09 | 1 | 28 | 1 | 784 | 28 |
| 23 | TO-38 | 1 | 28 | 1 | 784 | 28 |
| 24 | T0-39 | 1 | 26 | 1 | 676 | 26 |
| 25 | TO-37 | 1 | 25 | 1 | 625 | 25 |
| 26 | TO-30 | 1 | 24 | 1 | 576 | 24 |
| 27 | TO-11 | 1 | 23 | 1 | 529 | 23 |
| 28 | TO-34 | 0 | 23 | 0 | 529 | 0 |
| 29 30 | TO-23 | 0 | 23 | 0 | 529 | 0 |
| 30 | TO-21 | 0 | 18 | 0 | 324 | 0 |
| 31 | TO-04 | 1 | 18 | 0 | 324 | 0 |
| 32 33 | TO-36 | 1 1 | 17 16 | 1 | 289 256 | 17 16 |
| 34 | TO-02 | 0 | 16 | 0 | 256 | 0 |
| 35 | TO-25 | 1 | 16 | 1 | 256 | 16 |
| 36 | TO-19 | 0 | 15 | 0 | 225 | 0 |
| 37 | TO-14 | 1 | 13 | 1 | 169 | 13 |
| 38 | TO-17 | 1 | 13 | 1 | 169 | 13 |
| 39 | TO-26 | 0 | 12 | 0 | 144 | 0 |
| 40 | TO-15 | 1 | 11 | 1 | 121 | 11 |
| $\Sigma$ |  | 33 | 1032 | 33 | 28954 | 907 |


$r_{x y}$

$=0,479$
For $\alpha=5 \%$ and number of subject 40, $r_{\text {table }}=0.312$
Because $r x y>r$ table, then item number 2 is valid.

## Appendix 4

## The Computation of the Reliability Test

Formula
$r_{11}=\left(\frac{k}{k-1}\right)\left(1-\frac{M(k-M)}{k V t}\right)$

Explanation
k
M
Vt

## The number of items

: The means of the scores

Criteria
The instrument is reliable if $r_{11}>r$
The following is the computation of the reliability of the instrument.


M


$=0,864$
For $\alpha=5 \%$ and number of subject 40, $r_{\text {table }}=0.312$ Because $r_{11}>r_{\text {table }}$, then instrument is reliable


## Appendix 5

## The Computation Level of Difficulty

## Formula

$\square$

Explanation

| P | $:$ | The facility value (index of difficulty) |
| :--- | :--- | :--- |
| B | $\vdots$ | The number of students who answered correctly |
| Js | $:$ | The total number of the students |

Criteria

| Interval |  |  | Criteria |  |
| :---: | :---: | :---: | :---: | :---: |
| 0,00 | $<$ | $\mathrm{IK} \leq$ | 0,30 | Difficult |
| 0,30 | $<$ | $\mathrm{IK} \leq$ | 0,70 | Medium |
| 0,70 | $<$ | $\mathrm{IK} \leq$ | 1,00 | Easy |

The following is the example of computation of the facility value of item number 2, and for the other items will use the same formula.


According to the criteria, the item number 2 is easy

## Apendix 6

## The Computation of the Discriminating Power

Formula
$D=\frac{B_{\Lambda}}{J_{\Lambda}}-\frac{B_{B}}{J_{B}}$
Explanation
D
$\mathrm{B}_{\mathrm{A}}$
$B_{B}$
$J_{A}$
$J_{B}$
discrimination index
The number of students in upper group who answered the item correctly
The number of students in lower group who answered the item correctly
The number of students in upper group
The number of students in lower group

## Criteria

|  |  | Interval | Criteria |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathrm{D} \leq$ | 0,20 | Poor |
| 0,20 | $<$ | $\mathrm{D} \leq$ | 0,40 | Satisfactory |
| 0,40 | $<$ | $\mathrm{D} \leq$ | 0,70 | Good |
| 0,70 | c | $\mathrm{D} \leq$ | 1,00 | Excellent |

> The following is the example of the computation of the item discrimination of item number 2 , and for the other items will use the same formula formula.

| Upper group |  |  | Lower group |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Code | Score | No | Code | Score |
|  | TO-05 | 1 | , | TO-06 | , |
| 2 | TO-03 | , | 2 | TO-09 | 1 |
| 3 | TO-10 | 1 | 3 | TO-38 | 1 |
| $\begin{aligned} & 4 \\ & 5 \end{aligned}$ | TO-33 TO-35 | 1 | 4 | TO-39 TO-37 | 1 |
| 6 | TO-18 | 1 | 6 | TO-30 | 1 |
| 7 | TO-13 | 1 | 7 | TO-11 | 1 |
| 8 | TO-16 | 1 | 8 | то-34 |  |
| 9 | TO-40 | 1 | 9 | T0-23 | PERP |
| 10 | TO-12 | 1 | 10 | то-21 | 0 |
| 11 | TO-01 | 1 | 11 | TO-04 | 0 |
| 12 | TO-27 | 1 | 12 |  |  |
| 13 14 | TO-08 TO-31 | 1 | 13 14 | TO-32 TO-02 | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ |
| 14 15 | TO-31 TO-28 | 1 | 14 15 | TO-02 TO-25 | 0 1 |
| 16 | TO-20 | 1 | 14 <br> 16 | TO-19 | 1 |
| 17 | TO-24 | 1 | 17 | TO-14 | 1 |
| 18 | TO-07 | 1 | 18 | TO-17 | 1 |
| 19 20 | TO-22 TO-29 | 1 | 19 | TO-26 | 0 |
| Sum |  | 20 | 20 | Sum | 13 |

D
$=\frac{20}{20}$

| 13 |
| :--- |
| 20 |

$=0,35$

According to the criteria, the item no 2 is satisfactory

## Appendix 7

PRE-TEST

## VOCABULARY TEST

| Subject | : English |
| :--- | :--- |
| Class | $:$ VII |
| Semester | $:$ I |
| Time | $: 40$ minutes |

Choose the right answer on your paper by crossing (X) a, b, c, or d. (Pilihlah jawaban yang tepat dengan memberi tanda silang (X) pada huruf a, b, c, atau d pada lembar jawaban) 21. Teacher : Good ...., how are you today?

Students: Good morning, Miss
a. night
b. morning
c. evening
22. Tania : Can I ..... my self? My name is Tania

Susan : I am Susan.
a. introduce
b. remind
c. answer
d. remember
23. Elephant is a .... Animal
a. thick
b. thin
c. tall
d. big
24. Tania is a .... girl. She has blonde hair and pointed nose
a. handsome
b. beautiful
c. good
d. patient
25. Richard buys some cakes and bread in the ....
a. bakery
b. florist
c. grocery
d. butcher
26. You can sweep the floor with a ...
a. broom
b. mop
c. duster
d. map
27. At home, you can keep the car in the..
a. bedroom
b. bathroom
c. garage
d. kitchen
28. Today is Monday, tomorrow is...
a. Wednesday
b. Friday
c. Thursday
d. Tuesday
29. This month is July, last month was....
a. February
b. June
c. March
d. April
30. Yesterday was Saturday, today is....
a. Sunday
b. Thursday
c. Friday
d. Monday
31. Pencil is used for....
a. cutting
b. erasing
c. calling
d. writing
32. The colors of our hair is usually ....
a. green
b. blue
c. black
d. pink
33. The colors of elementary school students' uniform are ....
a. red and green
b. red and white
c. red and black
d. red and blue
34. My mother is baking the cake in the kitchen. Her hobby is ...
a. hunting
b. chatting
c. climbing
d. cooking
35. The color of good teeth is ....
a. white
b. black
c. yellow
d. red

## B. Fill in the blank spaces using the words given in the box!

 . This is Mr. Hamid. Mr. Hamid is a teacher. He works at (1) .... . He (2) .... every day. He teaches English. The students like him because he is (3) ... ... He teaches patiently and explains (4) ...
 done to know the ability of the students in (7) ..... the lesson.
 wider. We can (10) ....with other people in different language in other countries.

| communicate | explanation | late |
| :--- | :--- | :--- |
| school | a good teacher | understanding |
| the lesson | a bad teacher <br> the materials | important |

C. Match the following words with their opposite in the box! Number one has been done for you

| 11. Fast |
| :--- | :--- |

12. Young
13. Low
14. Ugly
15. Tall
16. Rich
17. Small
18. Easy
19. Smart
20. Clean


## Appendix 8

## POST-TEST

## vOCABULARY TEST

| Subject | $:$ English |
| :--- | :--- |
| Class | $:$ VII |
| Semester | $:$ I |
| Time | $: 40$ minutes |

Choose the right answer on your paper by crossing (X) a, b, c, or d. (Pilihlah jawaban yang tepat dengan memberi tanda silang (X) pada huruf a, b, c, atau d pada lembar jawaban) 36. Teacher : Good ...., how are you today?

Students : Good morning, Miss
e. night
f. morning
g. evening
h. afternoon
37. Tania : Can I ..... my self? My name is Tania.

Susan : I am Susan.
e. introduce
f. remind
g. answer
h. remember
38. Elephant is a .... Animal
e. thick
f. thin
g. tall
h. big
39. Tania is a .... girl. She has blonde hair and pointed nose
e. handsome
f. beautiful
g. good
h. patient
40. Richard buys some cakes and bread in the ....
e. bakery
f. florist
g. grocery
41. You can sweep the floor with a ....
e. broom
f. mop
g. duster
h. map
42. At home, you can keep the car in the..
e. bedroom
f. bathroom
g. garage
h. kitchen
43. Today is Monday, tomorrow is...
e. Wednesday
f. Friday
g. Thursday
44. This month is July, last month was...
e. February
f. June
g. March
h. April
45. Yesterday was Saturday, today is....
e. Sunday
f. Thursday
g. Friday
$\begin{array}{ll}\text { g. } & \text { Friday } \\ \text { h. } & \text { Monday }\end{array}$
46. Pencil is used for....
e. cutting
f. erasing
g. calling
h. writing
47. The colors of our hair is usually ....
e. green
f. blue
g. black
h. pink
48. The colors of elementary school students' uniform are ....
e. red and green
f. red and white
g. red and black
g. red and black
h. red and blue
49. My mother is baking the cake in the kitchen. Her hobby is ....
e. hunting
f. chatting
g. climbing
50. The color of good teeth is ....
e. white
f. black
g. yellow
h. red

## B. Fill in the blank spaces using the words given in the box!



My English Teacher
 (5) .... to school.
 done to know the ability of the students in (7) .... the lesson.
 wider. We can (10) ....with other people in different language in other countries.

| communicate | explanation | late |
| :--- | :--- | :--- |
| school | a good teacher | understanding |
| the lesson | a bad teacher | teaches |
| the materials | important |  |

C. Match the following words with their opposite in the box! Number one has been done for you

| 21. Fast | w. Stupid |
| :---: | :---: |
| 22. Young | x. Slow |
| 23. Low | y. Difficult |
| 24. Ugly | z. Boring |
| 25. Tall | aa.Beautiful |
| 26. Rich | bb.Short |
| 27. Small | cc.Poor |
| 28. Easy | dd. Dirt |
| 29. Smart | y |
| 30. Clean | ee.Tidy |
|  | ff. Old |
|  | gg. Hig |



Appendix 9
The Pre-test and Post-test Student's Scores

| Experimental Group |  |  |  | Control Group |  |  |  |  | Post test | Pre test | Post test |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No | Code | $\begin{aligned} & \text { Pre } \\ & \text { test } \end{aligned}$ | Post test | No | Code | $\begin{aligned} & \text { Pre } \\ & \text { test } \end{aligned}$ | Post test | Pre test |  |  |  |
| 1 | E-01 | 69 | 97 | 1 | C-01 | 51 | 80 | 24 | 34 | 18 | 28 |
| 2 | E-02 | 31 | 60 | 2 | C-02 | 71 | 86 | 11 | 21 | 25 | 30 |
| 3 | E-03 | 40 | 77 | 3 | C-03 | 26 | 49 | 14 | 27 | 9 | 17 |
| 4 | E-04 | 60 | 83 | 4 | C-04 | 54 | 77 | 21 | 29 | 19 | 27 |
| 5 | E-05 | 63 | 86 | 5 | C-05 | 63 | 74 | 22 | 30 | 22 | 26 |
| 6 | E-06 | 66 | 89 | 6 | C-06 | 46 | 63 | 23 | 31 | 16 | 22 |
| 7 | E-07 | 49 | 71 | 7 | C-07 | 51 | 71 | 17 | 25 | 18 | 25 |
| 8 | E-08 | 46 | 74 | 8 | C-08 | 63 | 77 | 16 | 26 | 22 | 27 |
| 9 | E-09 | 60 | 86 | 9 | C-09 | 43 | 66 | 21 | 30 | 15 | 23 |
| 10 | E-10 | 31 | 63 | 10 | C-10 | 66 | - 71 | 11 | 22 | 23 | 25 |
| 11 | E-11 | 69 | 86 | 11 | C-11 | 77 |  | 24 | 30 | 27 | 28 |
| 12 | E-12 | 60 | 89 | 12 | C-12 | 29 | - 49 | 21 | 31 | 10 | 17 |
| 13 | E-13 | 66 | 94 | 13 | C-13 | 43 | 66 | 23 | 33 | 15 | 23 |
| 14 | E-14 | 71 | 91 | 14 | C-14 | 57 |  | 25 | 32 | 20 | 23 |
| 15 | E-15 | 46 | 83 | 15 | C-15 | 57 | 1.120 | 16 | 29 | 20 | 28 |
| 16 | E-16 | 40 | 77 | 16 | C-16 | 34 | - N-54 | 14 | 27 | 12 | 19 |
| 17 | E-17 | 63 | 86 | 17 | C-17 |  | (20 | 22 | 30 | 17 | 21 |
| 18 | E-18 | 71 | 97 | 18 | C-18 |  | - 57 | 25 | 34 | 13 | 20 |
| 19 | E-19 | 66 | 94 | 19 | C-19 |  | 66 | 23 | 33 | 15 | 23 |
| 20 | E-20 | 63 | 91 | 20 | C-20 | 51. | 71 | 22 | 32 | 18 | 25 |
| 21 | E-21 | 54 | 71 | 21 | C-21 | 57 | 74 | 19 | 25 | 20 | 26 |
| 22 | E-22 | 69 | 94 | 22 | C-22 | 46 | 57 | 24 | 33 | 16 | 20 |
| 23 | E-23 | 29 | 69 | 23 | C-23 | 57 | 80 | 10 | 24 | 20 | 28 |
| 24 | E-24 | 51 | 74 | 24 | C-24 | 63 | 71 | 18 | 26 | 22 | 25 |
| 25 | E-25 | 66 | 89 | 25 | C-25 | 40 | 66 | 23 | 31 | 14 | 23 |
| 26 | E-26 | 63 | 77 | 26 | C-26 | 49 | 66 | 22 | 27 | 17 | 23 |
| 27 | E-27 | 40 | 71 | 27 | C-27 | 66 | 83 | 14 | 25 | 23 | 29 |
| 28 | E-28 | 51 | 83 | 28 | C-28 | 26 | 34 | 18 | 29 | 9 | 12 |
| 29 | E-29 | 63 | 83 | 29 | C-29 | 63 | 71 | 22 | 29 | 22 | 25 |
| 30 | E-30 | 51 | 83 | 30 | C-30 | 40 | 69 | 18 | 29 | 14 | 24 |
| 31 | E-31 | 49 | 80 | 31 | C-31 | 60 | 71 | 17 | 28 | 21 | 25 |
| 32 | E-32 | 37 | 63 | 32 | C-32 | 49 |  | 13 | 22 | 17 | 2 |
| 33 | E-33 | 63 | 86 | 33 | C-33 | 40 | 63 | 22 | 30 | 14 | 22 |
| 34 | E-34 | 43 | 83 | 34 | C-34 | 63 | 74 | 15 | 29 | 22 | 26 |
| 35 | E-35 | 60 | 89 | 35 | C-35 | 43 | 69 | 21 | 31 | 15 | 24 |
| $\begin{array}{r}36 \\ \hline\end{array}$ | E-36 | 74 | 94 | 36 | C-36 | 54 | 71 | 26 | 33 | 19 | 25 |
| 37 | E-37 | 51 | 74 | 37 | C-37 | 46 | 60 | 18 | 26 | 16 | 21 |
| 38 | E-38 | 54 | 86 | 38 | C-38 | 63 |  | 19 | 30 | 22 | 26 |
| $\Sigma$ | $=$ | 2097 | 3123 | $\Sigma$ | $=$ | 1934 | 2523 |  |  |  |  |
| $\mathrm{n}_{1}$ | = | 38 | 38 | $\mathrm{n}_{2}$ | = | 38 | 38 |  |  |  |  |
| - |  |  |  |  |  |  | PERPUSTAKAAN |  |  |  |  |
| $\mathrm{X}_{1}$ | $=$ | 55,19 | 82,18 | $\mathrm{X}_{2}$ | = | 50,90 |  |  |  |  |  |
| $\mathrm{s}_{1}{ }^{2}$ | = | 152,7216 | 94,1795 | $\mathrm{s}_{2}{ }^{2}$ | = | 151,7287 | - ${ }_{211,5540}$ |  |  |  |  |
| $\mathrm{S}_{1}$ | = | 12,36 | 9,70 | $\mathrm{S}_{2}$ | = | 12,32 | 14,54 |  |  |  |  |

## Levene's Test for Equality of Variances Data of Pre test

Hypothesis
Ho : $\sigma_{1}{ }^{2}=\sigma_{2}{ }^{2}$
$\mathrm{Ha}: \sigma_{1}{ }^{2}$ $\sigma_{2}{ }^{2}$

## The Calculation



```
For \alpha=5% with
df 1=n1-1 = 38-1=37
df 2=n2-1 = 38- 1=37
F
```



Since $F$ value $<F$ table, the experimental and control group have the same variance.

Appendix 10

## Independent Samples Test Data of Data of Pre test

## Hypothesis

Ho
$\begin{array}{lll}H_{0} & : & \mu_{1} \\ \mathrm{Ha} & : & \mu_{1}\end{array}$ $\mu_{2}$

The Calculation
Formula
$\mathrm{t}=\frac{\overline{\mathrm{x}}_{1}-\overline{\mathrm{x}}_{2}}{\mathrm{~s} \sqrt{\mathrm{l}_{1}+\frac{1}{\mathrm{n}_{1}}}}$
which
$\mathrm{s}=\sqrt{\frac{\left(\mathrm{n}_{1}-1\right) s_{1}^{2}+\left(\mathrm{n}_{2}-1\right) \mathrm{s}_{2}^{2}}{\mathrm{n}_{1}+\mathrm{n}_{2}-2}}$

Ho is accepted if $-\mathrm{t}_{(1-1 / 2 \alpha)(n 1+n 2-2)} \leq \mathrm{t}$ value $\leq \mathrm{t}_{(1-1 / 2 \alpha)(n 1+n 2-2)}$

 12,338

$$
\mathrm{t}=\frac{55,19}{12,338} \sqrt{\sqrt{\frac{1}{38}+\frac{1}{38}}}=1,514
$$

For $\alpha=5 \%$ and $\mathrm{df}=38+38-2=74, \mathrm{t}_{(0.975)(74)}=$

Since $-t_{\text {table }} \leq t_{\text {value }} \leq t_{\text {table }}$, it means there is a no significant difference between experimental and control classes on the pre test.


## Appendix 11

## Independent Samples Test Data of Data of Post tes

Hypothesis
Ho

$\mathrm{Ha}:$| $\mu_{1}$ | $\leq$ | $\mu_{2}$ |
| :--- | :--- | :--- |
| $\mu_{1}$ | $>$ | $\mu_{2}$ |

The Calculation
Formula
$\mathrm{t}=\frac{\overline{\mathrm{x}}_{1}-\overline{\mathrm{x}}_{2}}{\mathrm{~s} \sqrt{\frac{1}{\mathrm{n}_{1}}+\frac{1}{\mathrm{n}_{2}}}}$

t


For $\alpha=5 \%$ and $\mathrm{df}=38+38-2=74, \mathrm{t}_{(0.95)(74)}=$
1,67


Since $t_{\text {value }}>t_{\text {table }}$, it means there is significant difference between experimental and control classes on the post test, the experimental group is higher than the control one.


