

Development of Sentences Graded in Difficulty for Lipreading Practice

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This report describes the development of sentences for lipreading drill and practice for postlingually hearing-impaired adults. Sentences were videotaped and administered visually to 24 normal-hearing adult subjects for a verbatim write-down response. A lipreading difficulty index was calculated for each sentence from word correct scores of the subjects. Three hundred sentences graded in lipreading difficulty were then chosen and arranged in 12 lists of 25 sentences each, such that each list was significantly different in lipreading difficulty from its contiguous list(s), but sentences within a list were of roughly equal difficulty. These lists of sentences and their lipreading difficulty indices are included in an appendix.

Traditional face-to-face drill and practice in lipreading has been used with hearing-impaired adults since the earliest publications on the subject, as exemplified by Nitchie's (1916) procedures. Recent technological developments have provided an opportunity for the application of computer-assisted interactive video (CAIV) instruction to lipreading (Sims, Kopra, Dunlop, & Kopra, 1985). In order to determine the effect of CAIV instruction on the development of lipreading skill, an experimental application was planned in a program of aural rehabilitation for postlingually hearing-impaired adults (Kopra, Kopra, & Dunlop, 1984). For this purpose, lipreading difficulty indices were obtained on 523 sentences. This information was used later for the construc-

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tion of 12 lists of 25 sentences each (300 sentences) whose lipreading difficulty was specified. These graded-difficulty sentences were pressed on videodisc and programmed for CAIV instruction in lipreading for use with an auditory-visual laser videodisc interactive system (ALVIS). This report summarizes procedures used for the development of these sentences. The objective was to enable selection of easier lipreading material at the beginning of practice and progressively more difficult material as lipreaders gain experience and proficiency.

METHOD

Selection of Material

Historically, the choice of stimulus materials for lipreading has included nonsense syllables, monosyllabic contrast words (paired comparisons for visual discrimination), polysyllabic words, phrases, familiar expressions, sentences, stories, and anecdotes. For the current project, unrelated sentences were chosen as the lipreading stimuli.

As early as 1874, William Martin Chamberlain, a hearing-impaired person, testified at the first convention of teachers of "visible speech" that the comprehension of conversation depended on context (Fay, 1874). Nitchie (1904) believed emphasis should not be placed on "word deciphering" but on "grasping the meaning as a whole" (p. 198). In their lessons, Kinzie and Kinzie (1931) used sentences to identify vocabulary words. Hipskind (1980) noted that the synthetic approach, postulated by Nitchie and the Kinzies, "considers the sentence to be the basic unit and 'backbone' of visual speech perception" (p. 127). Farrimond (1959) chose sentences in his research instead of words or syllables because lipreading sentences is more closely related to visual interpretations of speech signals. After his review of studies on the effects of linguistic factors on lipreading, Berger (1972) also concluded that sentences were preferable to words.

Sentences allow systematic increase of what Bocca (1967) called "extrinsic redundancy" of the speech message, "where the likelihood of the phonetic links is accompanied by the probability of the semantic, grammatical, and syntactical link" (p. 361). In the case of lipreading stimuli, the relative visibility would also affect the extrinsic redundancy of a sentence.

We adapted criteria identified by Berger (1972) and Ordman and Ralli (1976) as important in the selection of sentences for lipreading practice for postlingually hearing-impaired adults. Additional constraints were imposed as a result of the authors' experience in preparing materials for aural rehabilitation. The following factors were considered in selecting sentences:

1. Familiarity. The material should include common expressions that are apt to occur in day-to-day conversations.
2. Social survival impact. Topics should be related to a hearing-impaired

person's everyday oral communication situations.

3. Sentence length. Each item should have a minimum of five words in order to satisfy the requirements of the instructional paradigm (number of repetitions provided in the computer program) and a maximum of eight words in order to have a manageable number of words to be typed into the computer by the lipreading student.
4. Variety of articulatory movement. The lipreading student should experience a variety of lipreading movements in conversational speech.
5. Visibility of visemes. The amount of visual information should vary because visibility of the message in daily conversational discourse varies widely.
6. Limited vocabulary. The total number of different words used in all of the sentences should be limited in order to reflect the redundancy in everyday conversational speech.

A pool of sentences, including statements, questions, and imperatives, was constructed to incorporate the criteria cited above. Some of these sentences were selected and adapted from sentence material in the lipreading literature (Nitchie, 1950; Ordman & Ralli, 1976; Shurina, 1977), and other sentences were generated by us for this purpose. From this pool, 525 sentences that were appropriate for lipreading drill and practice were selected and randomly divided for ease of administration into 21 sets of 25 sentences each.

Recording of Material

Each of the 525 sentences was spoken with normal voice by a male talker with a general American dialect. The front view of the talker's face and shoulders was recorded in color on $\frac{3}{4}$ -inch videotape with a Panasonic Model WV 3600 portable camera and zoom lens attachment. Uniform illumination was provided by three overhead 200-watt lights.

From the 525 sentences, 75 sentences were randomly chosen and edited and dubbed to provide an additional three sets of 25 sentences each. As repeat items, these 75 sentences provided for an examination of reliability in lipreading of sentences. The final number of sentences to be administered was 598. (Two sentences were accidentally erased in the editing process.)

To facilitate administration of the sentences as lipreading stimuli, the sentence number, spoken by a female talker, was inserted on the audio track of the videotape preceding each sentence. The set number was also announced at the beginning of each set by the same female talker.

Subjects

Nineteen female and five male normal-hearing students enrolled at The University of Texas, ranging in age from 20 to 33 years ($M = 24.6$ years), served as subjects. Twenty-two subjects were majoring in communication disorders. Twenty subjects had served previously in a lipreading study of minimal viseme

contrasts of consonants. Subjects were administered standard pure-tone threshold audiometry and demonstrated normal hearing (better than 15 dB HL at 250-6000 Hz). Each subject passed a visual screening test, naturally or corrected, at 20/20 with the Snellen chart. The subjects were paid to participate.

Test Procedure

Individually, subjects viewed the videotaped sentences in 1-hr blocks. The order of presentation of the 24 sets was counterbalanced across subjects. No subject was tested more than 1 hr on any given day, and no more than four sets (100 sentences) were administered in any given session. The average total time required to view the 598 sentences was about 6 hr.

The sentences from a videocassette player (Sony VP-2011) were viewed at a distance of 4 ft on a 12-in. color monitor (Sony CVM-1250 Trinitron) without sound in a very quiet and well lit room. The image of the talker was approximately $\frac{3}{4}$ life size. Responses were written on a prepared response sheet.

Subjects were given written instructions that were then repeated by the examiner. They were informed that the sentences in the sets were unrelated. They were instructed to write down any part of the sentence they understood and not to hesitate to guess. The videotape player was stopped after each sentence until the subject finished writing and looked up for the next item.

Responses were scored by counting the number of correct words in each sentence. In the case of contractions, either form was considered correct. If a subject added a word to an otherwise correct sentence, one point was subtracted. Verb tense and the number of the noun (plural or singular) had to be correct. Homophones (e.g., "hear" for "here," "there" for "their") were scored as incorrect.

RESULTS

The mean percent words correct and standard deviations for each subject on the 523 sentences are shown in Figure 1 (repeat items are not included). Subjects' mean scores ranged from 34.8% to 84.6%.

Lipreading scores were also analyzed by presentation order. Recall that the order of presentation of the 24 sets of sentences to the 24 subjects was counterbalanced. Figure 2 shows the mean percent words correct and standard deviations arranged by presentation order. Results of a repeated measures analysis of variance indicated that average performance on the sets differed significantly across presentation order, $F(23,529) = 4.89$, $p < .05$ (SAS Institute, 1985). The figure shows that most of the improvement in mean scores appeared between the 1st and the 11th set, that is, during the first 3 hr of testing time.

Sets 22, 23, and 24 with 25 sentences each constituted repeat items chosen equally and randomly from the 523 sentences. Table 1 shows means and standard deviations for lipreading scores for the repeat items expressed in percent words correct. Mean percent words correct for these repeat sets ranged from

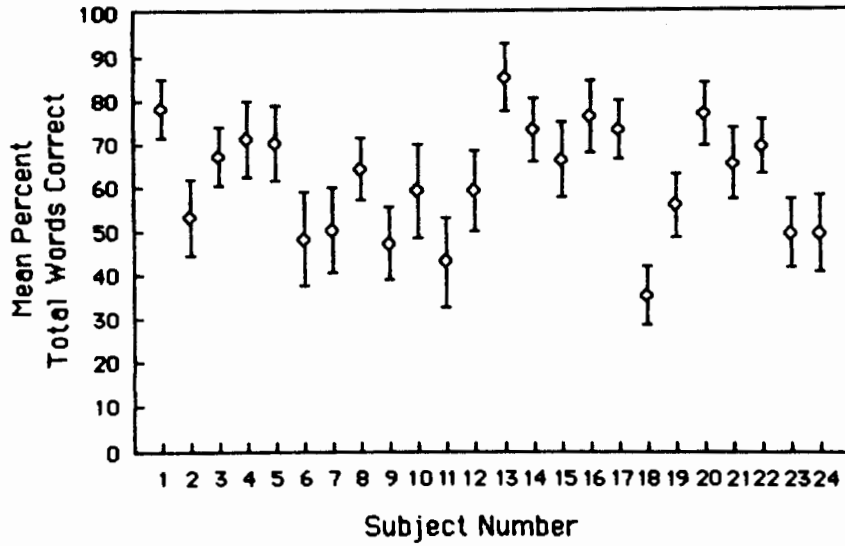


Figure 1. Mean percent words correct and standard deviations (bars) for each of 24 subjects on 523 sentences.

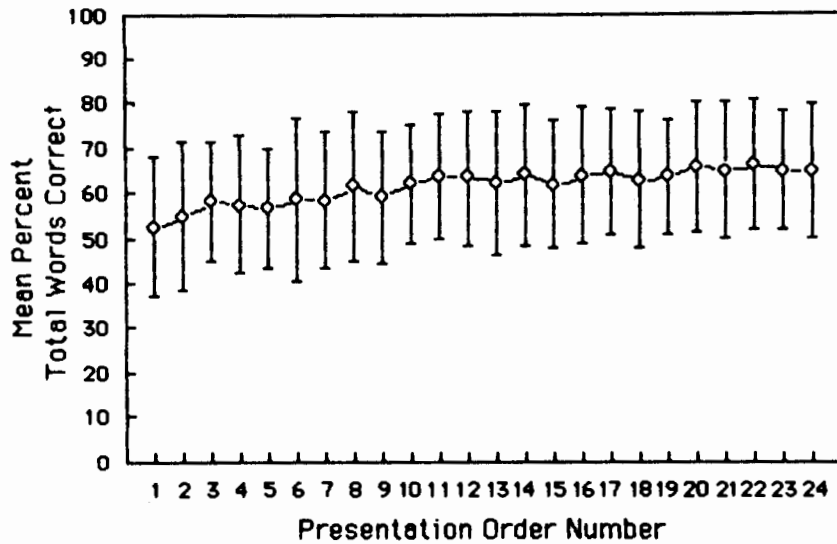


Figure 2. Mean percent words correct and standard deviations (bars) for sets of sentences arranged by presentation order.

56.5% to 60.0%. Also, Pearson correlation coefficients were computed between the percent words correct for the two trials of the items in the repeat sets. The resulting correlations were consistently .96 or higher, indicating high reliability in performance on the sentences across trials.

Table 1
Means and Standard Deviations for Lipreading Scores in Percent Words Correct
and Correlation Coefficients Between First and Second Trials
with Repeat Sentences in Sets 22, 23, and 24

Trial	Sets of Repeat Sentences								
	22			23			24		
	<i>M</i>	<i>SD</i>	<i>r</i>	<i>M</i>	<i>SD</i>	<i>r</i>	<i>M</i>	<i>SD</i>	<i>r</i>
First	56.5	28.1		59.9	21.1		57.6	24.9	
Second	58.9	29.0	.968	60.0	22.7	.957	56.6	22.3	.962

For each sentence, a lipreading difficulty index (LDI) was calculated by use of the following formula: $LDI = \Sigma r / N^s N^w$, where Σr is the total number of words in a sentence lipread correctly by subjects, N^s is the number of subjects, and N^w is the number of words in the sentence. This calculation is based on a procedure described by Taaffe and Wong (1957). The LDIs of the 523 sentences were then arranged in descending order of magnitude from easiest to most difficult.

Subsequently, 300 sentences were chosen from the 523 sentences for the construction of 12 homogeneous lists of 25 sentences each, such that each list was significantly different in lipreading difficulty from its contiguous list(s), but the sentences within a list were of roughly equal difficulty. Figure 3 shows the means and ranges of the LDIs (vertical bars) for the 12 lists with sentences arranged in order from least difficult ($LDI \times 100 = 995$) to most difficult ($LDI \times 100 = 8$). These lists and the LDIs for each sentence are shown in the Appendix.

The total number of words in each list varied from 146 to 163. As shown in Table 2, the easier lists tended to have a smaller number of different words. In other words, list difficulty increased as type-token ratio increased.

DISCUSSION

The large differences in subjects' lipreading performance, as shown in Figure 1, are not surprising in view of the fact that individuals vary widely in their baseline ability to lipread sentences or other speech messages (Farrimond, 1959; Jeffers & Barley, 1971; Sanders & Coscarelli, 1970). However, because procedures in experimental studies have varied widely, comparison of lipreading performance data with other studies is not possible. For instance, Farrimond (1959) administered sentences on film to subjects individually, but preceded the sentence to be lipread with a short scene of an appropriate activity. Barley (Jeffers & Barley, 1971) administered sentences live, without voice, in groups of no more than 20 subjects. Sanders and Coscarelli (1970) administered the Utley Lipreading Sentence Test, Form B, individually or in small

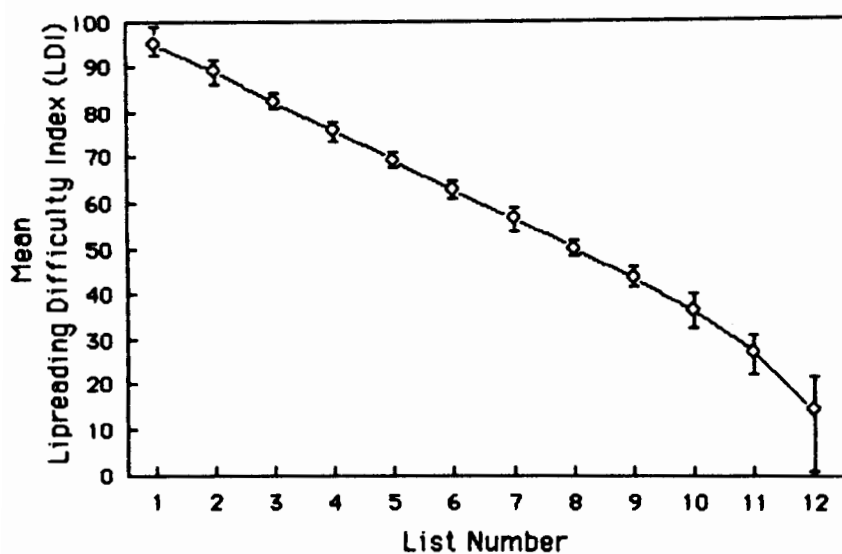


Figure 3. Mean lipreading difficulty indices (LDI \times 100) and ranges (vertical bars) for each of 12 lists of 25 sentences.

Table 2

Number of Different Words and Total Words in 12 Lists of 25 Sentences Each Ordered from Least Difficult (List 1) to Most Difficult (List 12)

List	Mean LDI ^a	Number of different words	Total number of words	Type-token ratio
1	95.0	85	158	.54
2	89.1	85	146	.58
3	82.3	107	155	.69
4	75.9	92	160	.58
5	69.4	106	155	.68
6	62.9	104	163	.64
7	56.5	101	158	.64
8	50.0	103	150	.69
9	43.6	119	159	.75
10	36.1	109	157	.69
11	26.9	112	156	.72
12	14.2	107	150	.71
Total		604	1,867	

^a(Lipreading Difficulty Index) \times 100.

groups of 8 or less, live through a glass window of a sound-isolation booth. The only conclusion one can draw from an examination of these data and from the lipreading performance data in the literature is that both normal-

hearing and hearing-impaired people vary widely in their baseline ability to lipread.

Figure 2 demonstrates that young normal-hearing subjects improved their lipreading performance by repeated exposure to lipreading of unrelated sentences. Their performance improved 12% on average during the first 3 hr of testing (Sets 1 through 11) but no apparent improvement occurred during the last half of testing (Sets 12 through 24). This improvement occurred in spite of the fact that the subjects were given no feedback about their responses. It is not known if a similar result would be demonstrated with hearing-impaired persons.

Data on the repeat sentences shown in Table 1 verify the consistency of performance within subjects on test and retest of the same sentences. The credibility of the LDI as a measure of difficulty is also supported by the high correlation coefficients.

It is interesting to note in Table 2 that as list difficulty increased the number of different words tended to increase. Bocca's (1967) differentiation between intrinsic redundancy (the overabundance of neural connections for the transduction of signals from the periphery to the auditory cortex) and extrinsic redundancy (the overabundance of information in ordinary speech) seems particularly applicable here. To the degree that hearing loss causes speech to be perceived as not loud enough and/or not clear enough by the hearing-impaired person, there is a loss of intrinsic redundancy. When intrinsic redundancy is lost, correct message recognition requires that the extrinsic redundancy of the message be increased to make up for that loss. In the lipreading teaching situation, the teacher/clinician has control over the extrinsic redundancy of the speech message. Therefore, by increasing redundancy — giving clue words audibly or in print, choosing more familiar vocabulary, choosing more visible visemes in words — the probability of correct message reception will be increased (Sanders, 1971).

Although the data reported here were obtained on normal-hearing subjects, these sentences represent an initial effort to structure the relative difficulty of a standardized set of sentences as lipreading stimuli for postlingually hearing-impaired adults. A graded difficulty measure is especially valuable for use of these sentences in adaptive procedures in aural rehabilitation. These materials are included in the Appendix to be used by clinicians as stimulus materials in aural rehabilitation programs. Because these sentences have been used successfully on videodisc by the authors, we would be interested in feedback on the relative difficulty of the sentences when used with different speakers and with different methods of presentation.

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APPENDIX

THE UNIVERSITY OF TEXAS GRADED SENTENCES FOR LIPREADING PRACTICE

The Appendix contains 300 sentences arranged in Lists 1 through 12, which are sequentially and progressively more difficult. These 5- to 8-word sentences comprise familiar vocabulary with lipreading difficulty indices (see the text) ranging from .995 to .008. The 300 sentences are composed of a total of 1867 words with 604 different words.

LIST 1

1. Would you like to go for a walk? .995

2. The water is running in the bathroom.	.982
3. Have you met my brother?	.967
4. Won't you stay for supper?	.967
5. Move out of the way.	.967
6. I'm sorry I didn't hear you.	.965
7. Thank you for the birthday card.	.965
8. How do you spell your name?	.965
9. Watch out for the traffic.	.958
10. Please open the window for me.	.958
11. Would you like to go out for lunch?	.953
12. My brother is waiting in the car.	.952
13. I think that we are lost.	.951
14. I thanked him for the gift.	.951
15. Did you find what you were looking for?	.943
16. How are you feeling today?	.942
17. I have to go to the pharmacy.	.941
18. I found a five dollar bill.	.938
19. Do you have some change?	.933
20. I didn't understand what you said.	.931
21. Please help me with this problem.	.931
22. I want you to meet my wife.	.929
23. What did you think about the movie?	.929
24. Where are the tickets for the ball game?	.927
25. I think that I have a cold.	.923

LIST 2

1. What do you want for breakfast?	.917
2. I thought you were calling me.	.910
3. Did you enjoy the movie?	.908
4. I hope you feel better.	.908
5. Would you like some more coffee?	.903
6. My car is in the garage.	.903
7. What did you think of that?	.903
8. How much farther do we have to go?	.901
9. My birthday is next month.	.900
10. Why don't we go out for supper?	.899
11. My family is coming for a visit.	.899
12. Where did you find this book?	.896
13. Can you help me with this?	.896
14. Do you have any coupons?	.892
15. I'm finally finished with this project.	.889
16. I don't think that was fair.	.889
17. My watch is running fast.	.883
18. Let's go to a movie.	.883
19. Help me with this tablecloth.	.883
20. What seems to be the problem?	.875
21. Have you forgotten your appointment?	.875
22. Would you like to order?	.867
23. Please turn the radio off.	.867
24. This is the last cup of coffee.	.863
25. Let me help you with those bags.	.863

LIST 3

1. Did you follow the directions?	.833
2. I want to wish you a happy birthday.	.833
3. This is really a fine mess.	.833
4. I would like a small piece of pie.	.828
5. You have a package at the post office.	.828
6. I don't know what time it is.	.827
7. Please wait and I'll go with you.	.827
8. Do you need anything from the store?	.827
9. Where is the can opener?	.825
10. Have you seen the doctor?	.825
11. This soup is really delicious.	.825
12. Please fill out this form.	.825
13. What are your plans for the evening?	.821
14. Please pass the bread and butter.	.819
15. Did you hear the weather forecast?	.819
16. Have you heard the latest news?	.819
17. Which of these do you prefer?	.819
18. I missed my favorite TV show.	.819
19. It's been a long day.	.817
20. Where is the police officer?	.817
21. Please watch your step there.	.817
22. I think that we should pull over.	.816
23. They were going to wash the windows.	.816
24. I'm going on a fishing trip tomorrow.	.816
25. We'll be back in an hour.	.813

LIST 4

1. Would you like to play cards?	.778
2. I can't find my ruler.	.775
3. Have you taken your medicine?	.775
4. I have too much work to do.	.774
5. When are you going on vacation?	.771
6. I'm ready to see you now.	.771
7. Would you like to share this sandwich?	.768
8. I would like some of those shirts.	.768
9. I'll go buy some food for the picnic.	.766
10. The doctor said that I have an allergy.	.766
11. I left the bedroom window open.	.764
12. I have to have a physical.	.764
13. That was really fast service.	.758
14. Watch out for the pedestrians.	.758
15. Where have I seen her before?	.757
16. I think that you made a mistake.	.756
17. What would you like to do today?	.750
18. I don't think that is a good idea.	.750
19. My brother bought a new car.	.750
20. What would you like for supper?	.750
21. I have to write some letters.	.750
22. The meeting will be on Friday.	.750

- | | |
|-----------------------------------------|------|
| 23. Would you like a drink of water? | .738 |
| 24. I can't eat all of this food. | .738 |
| 25. May I have some fresh orange juice? | .738 |

LIST 5

- | | |
|---------------------------------------------------|------|
| 1. Yesterday I saw an old friend. | .708 |
| 2. I won't be able to stay very long. | .708 |
| 3. May I take your order please? | .708 |
| 4. I read that book already. | .708 |
| 5. There is someone here to see you. | .702 |
| 6. Be careful crossing the street. | .700 |
| 7. The pan was very hot. | .700 |
| 8. I have to pick up a package. | .696 |
| 9. I'll put these flowers in a vase. | .696 |
| 10. We rearranged the living room furniture. | .694 |
| 11. Please explain these papers to me. | .694 |
| 12. I need to buy some batteries. | .694 |
| 13. Let's hurry home and watch the baseball game. | .693 |
| 14. I didn't hear the doorbell. | .692 |
| 15. Shall I take you home? | .692 |
| 16. Would you like to see the menu? | .691 |
| 17. Please bring me a cup of tea. | .691 |
| 18. I got three birthday cards in the mail. | .688 |
| 19. When shall we leave for dinner? | .688 |
| 20. I believe that is my seat. | .688 |
| 21. The post office is across town. | .688 |
| 22. This chair is very comfortable. | .683 |
| 23. I think that I'm ready now. | .681 |
| 24. Something is burning in the kitchen. | .681 |
| 25. I didn't sleep well last night. | .681 |

LIST 6

- | | |
|----------------------------------------------|------|
| 1. The doctor told me to get some rest. | .646 |
| 2. I found a very interesting book. | .646 |
| 3. Be careful that you don't fall. | .646 |
| 4. I really enjoyed your visit. | .642 |
| 5. I'll put some money in the parking meter. | .641 |
| 6. I'll be back in a little while. | .637 |
| 7. Where did you go shopping? | .633 |
| 8. The store is too crowded. | .633 |
| 9. Where is the refreshment stand? | .633 |
| 10. I wrapped the package for mailing. | .632 |
| 11. Let's move the sofa over there. | .632 |
| 12. I have to read the electric meter. | .631 |
| 13. I went to visit him at the hospital. | .630 |
| 14. Can you give me a ride? | .625 |
| 15. I think it is going to rain. | .625 |
| 16. This grocery bag is heavy. | .625 |
| 17. I didn't see the accident. | .625 |
| 18. I haven't seen you in years. | .625 |
| 19. That was some storm we had last night. | .620 |

20. Would you like to pay this bill now?	.620
21. Do you think that it's going to rain?	.620
22. I'll pick you up at six o'clock.	.619
23. He wasn't ready to leave the party.	.619
24. I have a taste for some roast beef.	.615
25. I really enjoyed seeing you again.	.611

LIST 7

1. I spilled some milk on the floor.	.589
2. When did you have your brakes checked?	.589
3. I have a hole in my coat pocket.	.589
4. I heard that you bought a new car.	.589
5. She said that she was hungry.	.583
6. I'd like a bowl of soup.	.583
7. The gift is for my friend.	.583
8. Please check the lost and found.	.576
9. I'd like a drink of water.	.576
10. That movie had no plot.	.575
11. I will take your temperature.	.575
12. The home team was losing the game.	.571
13. Have you dusted the furniture?	.567
14. We ate some cheese and crackers.	.563
15. I have to put these dishes away.	.560
16. How many biscuits are left?	.558
17. Have a seat in the waiting room.	.554
18. I'm sure that he is hungry.	.549
19. Don't forget to take your umbrella.	.549
20. I ran out of my medicine.	.549
21. I'd like to have some breakfast.	.542
22. Please come to see me tomorrow.	.542
23. I'll have a piece of chocolate cake.	.542
24. We went to a church picnic on Saturday.	.537
25. Where can I have this repaired?	.535

LIST 8

1. I need to balance my checkbook.	.514
2. They went home at ten o'clock.	.514
3. I'm getting tired of all this rain.	.512
4. This fried chicken is wonderful.	.508
5. Does anyone have the time?	.508
6. I bought some fresh vegetables.	.508
7. These shoes are too small.	.508
8. I have a new grandson.	.508
9. Green beans are my favorite vegetable.	.507
10. I may be home late tonight.	.507
11. Don't forget to buy toothpaste.	.500
12. They are repairing the car.	.500
13. My daughter is a good cook.	.500
14. That person looks familiar to me.	.500
15. Would you hang this in the closet?	.500
16. The flashlight doesn't work anymore.	.500

17. I have too many packages to carry.	.494
18. Do you have a needle and thread?	.494
19. I'd like a cup of tea.	.493
20. What was the score at halftime?	.493
21. I'd like ice cream with my apple pie.	.490
22. Where can I apply for a loan?	.488
23. What can I bring to the party?	.488
24. I have to check my calendar.	.486
25. We all had a nice time.	.486

LIST 9

1. We had apple pie for dessert.	.465
2. I got a flat tire.	.458
3. The road is being resurfaced.	.458
4. I'm afraid my mind is a blank.	.458
5. The traffic came to a halt.	.458
6. Where is the produce section in this store?	.453
7. I need to mail this package.	.451
8. There is a detour sign up ahead.	.446
9. We are going to visit our friends.	.441
10. I haven't read any good books lately.	.441
11. It was not an easy decision.	.438
12. They were unable to fix the television.	.435
13. I've been looking forward to this trip.	.435
14. That clock must be slow.	.433
15. They grow all of their vegetables.	.431
16. Take this to the receptionist.	.425
17. You drive a hard bargain.	.425
18. I bought five cans of tomato juice.	.423
19. I was sorry to see them go.	.423
20. I lost a button on this shirt.	.423
21. Could you buy me a loaf of bread?	.417
22. I'd like some fried eggs.	.417
23. Your appointment is in one month.	.417
24. It's a beautiful day for a walk.	.417
25. I have two sons and three daughters.	.417

LIST 10

1. They are expecting a large crowd.	.403
2. It is too hot to do much work.	.396
3. Have a seat in this chair.	.389
4. They said that the roof was leaking.	.387
5. The keys were in my coat pocket.	.387
6. The workmen repaired the roof.	.383
7. There is no more shoe polish.	.382
8. My grandson is learning to read.	.382
9. There's not a cloud in the sky.	.381
10. That baked fish looks good.	.375
11. The sky was partly cloudy.	.367
12. My children are all grown.	.358
13. There are four doughnuts left.	.358

14. The nurse will take your pulse.	.354
15. My wife can't resist a sale.	.354
16. I need to talk to a loan officer.	.354
17. We blew a fuse last night.	.347
18. You look very nice today.	.342
19. I'd like to see the manager.	.340
20. Let's sit on the front porch.	.340
21. I can't wear this because it is torn.	.339
22. Here is a list of things we need.	.333
23. Don't throw that envelope away.	.325
24. When will the cake be ready to eat?	.323
25. This suit needs to be dry cleaned.	.321

LIST 11

1. Can you fix the television set?	.313
2. Your shoes are under the bed.	.313
3. The left front tire was flat.	.306
4. He wasn't hurt in the accident.	.306
5. The car needs a safety inspection.	.299
6. He bought his wife a new coat.	.286
7. I'll meet you at the hardware store.	.286
8. That shirt doesn't fit very well.	.285
9. Is there any soup left?	.283
10. I bought a new pair of slippers.	.280
11. I fixed her television set.	.275
12. He took advantage of the offer.	.271
13. It is hard to save money these days.	.271
14. He needed change for bus fare.	.271
15. Please come back again soon.	.267
16. We drove to the medical center.	.264
17. I signed a new lease on my apartment.	.260
18. My bank account appears to be overdrawn.	.256
19. I'll go buy some milk and bread.	.256
20. This looks like a good magazine.	.236
21. I love a home cooked meal.	.236
22. He missed the bus again.	.233
23. I'd like some hot buttered toast.	.229
24. He has a garden in his backyard.	.226
25. It is too noisy in here.	.222

LIST 12

1. We'll take my boat to the lake.	.220
2. My wife doesn't like to wait in lines.	.219
3. He likes wine with his meals.	.215
4. We packed the boxes carefully.	.208
5. They checked the air pressure in the tires.	.203
6. These shoes were a bargain.	.200
7. I mopped the kitchen floor.	.200
8. She took the cake out of the oven.	.198
9. The nurse brought my medicine.	.192
10. The dentist cleaned my teeth.	.167

11. I'd like to get some refreshments.	.160
12. May I borrow a cup of sugar?	.155
13. The nurse took my blood pressure.	.153
14. Storm warnings have been issued.	.150
15. Tonight they are predicting a frost.	.146
16. Your house is well built.	.117
17. Your blood pressure is normal.	.117
18. Could you sew this button on my shirt?	.115
19. Raking leaves is a chore.	.108
20. That song brings back memories.	.108
21. She is doing her holiday baking.	.083
22. Make a right turn here.	.042
23. Many of your friends are here.	.035
24. A group of fans rushed onto the field.	.026
25. I'll fill the bird feeder.	.008