

## *Juniors and Parents*

*Only 68 days until ACT!!*

### Today begins your February/March homework for ACT

September	Kaplan Exam
October	PSAT Exam
November	Practice test in ACT booklet proctored by parents Results should have been turned into Miss Odom by November 30
December	PSAT exam booklet and results returned. Students were asked to review their incorrect questions
January	Online ACT test prep from College in Colorado
February/March	Paper and Pen Test
April 23	ACT Test 7:35 am – noon Johnson and Wales University

By Friday, March 22, we are asking that all juniors take the attached practice test. We are asking that it is taken in “real” time. Make yourself sit for the entire designated time – no faster/slower. Do not allow yourself to listen to music or TV during the test. No food or drink. Don’t take the test on the couch or relaxing in your bed. Simulate a real ACT test: sit at a table in a library close to your home and/or a quiet place in your own house.

You will notice that you have TWO answer keys. After you have completed the test, fill out the answer key for “Miss Odom” and turn it into her so she can track your participation in our DSA ACT test prep. On March 22, the answer key will be put online. You can then check your work and see what you would have scored had this been a real ACT test.

*Good Luck and Happy Testing!!!*

# FOR MS. ODOM

## Answer Sheet MODEL EXAM A

Directions: Mark one answer only for each question. Make the mark dark. Erase completely any mark made in error. (Additional or stray marks will be counted as mistakes.)

### Test 1

- |            |            |            |            |
|------------|------------|------------|------------|
| 1 A B C D  | 21 A B C D | 41 A B C D | 61 A B C D |
| 2 F G H J  | 22 F G H J | 42 F G H J | 62 F G H J |
| 3 A B C D  | 23 A B C D | 43 A B C D | 63 A B C D |
| 4 F G H J  | 24 F G H J | 44 F G H J | 64 F G H J |
| 5 A B C D  | 25 A B C D | 45 A B C D | 65 A B C D |
| 6 F G H J  | 26 F G H J | 46 F G H J | 66 F G H J |
| 7 A B C D  | 27 A B C D | 47 A B C D | 67 A B C D |
| 8 F G H J  | 28 F G H J | 48 F G H J | 68 F G H J |
| 9 A B C D  | 29 A B C D | 49 A B C D | 69 A B C D |
| 10 F G H J | 30 F G H J | 50 F G H J | 70 F G H J |
| 11 A B C D | 31 A B C D | 51 A B C D | 71 A B C D |
| 12 F G H J | 32 F G H J | 52 F G H J | 72 F G H J |
| 13 A B C D | 33 A B C D | 53 A B C D | 73 A B C D |
| 14 F G H J | 34 F G H J | 54 F G H J | 74 F G H J |
| 15 A B C D | 35 A B C D | 55 A B C D | 75 A B C D |
| 16 F G H J | 36 F G H J | 56 F G H J |            |
| 17 A B C D | 37 A B C D | 57 A B C D |            |
| 18 F G H J | 38 F G H J | 58 F G H J |            |
| 19 A B C D | 39 A B C D | 59 A B C D |            |
| 20 F G H J | 40 F G H J | 60 F G H J |            |

### Test 2

- |              |              |              |              |
|--------------|--------------|--------------|--------------|
| 1 A B C D E  | 16 F G H J K | 31 A B C D E | 46 F G H J K |
| 2 F G H J K  | 17 A B C D E | 32 F G H J K | 47 A B C D E |
| 3 A B C D E  | 18 F G H J K | 33 A B C D E | 48 F G H J K |
| 4 F G H J K  | 19 A B C D E | 34 F G H J K | 49 A B C D E |
| 5 A B C D E  | 20 F G H J K | 35 A B C D E | 50 F G H J K |
| 6 F G H J K  | 21 A B C D E | 36 F G H J K | 51 A B C D E |
| 7 A B C D E  | 22 F G H J K | 37 A B C D E | 52 F G H J K |
| 8 F G H J K  | 23 A B C D E | 38 F G H J K | 53 A B C D E |
| 9 A B C D E  | 24 F G H J K | 39 A B C D E | 54 F G H J K |
| 10 F G H J K | 25 A B C D E | 40 F G H J K | 55 A B C D E |
| 11 A B C D E | 26 F G H J K | 41 A B C D E | 56 F G H J K |
| 12 F G H J K | 27 A B C D E | 42 F G H J K | 57 A B C D E |
| 13 A B C D E | 28 F G H J K | 43 A B C D E | 58 F G H J K |
| 14 F G H J K | 29 A B C D E | 44 F G H J K | 59 A B C D E |
| 15 A B C D E | 30 F G H J K | 45 A B C D E | 60 F G H J K |

# FOR MS. ODOM

Model Exam A

## Answer Sheet MODEL EXAM A

### Test 3

- |    |   |   |   |   |    |   |   |   |   |    |   |   |   |   |    |   |   |   |   |
|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|
| 1  | A | B | C | D | 11 | A | B | C | D | 21 | A | B | C | D | 31 | A | B | C | D |
| 2  | F | G | H | J | 12 | F | G | H | J | 22 | F | G | H | J | 32 | F | G | H | J |
| 3  | A | B | C | D | 13 | A | B | C | D | 23 | A | B | C | D | 33 | A | B | C | D |
| 4  | F | G | H | J | 14 | F | G | H | J | 24 | F | G | H | J | 34 | F | G | H | J |
| 5  | A | B | C | D | 15 | A | B | C | D | 25 | A | B | C | D | 35 | A | B | C | D |
| 6  | F | G | H | J | 16 | F | G | H | J | 26 | F | G | H | J | 36 | F | G | H | J |
| 7  | A | B | C | D | 17 | A | B | C | D | 27 | A | B | C | D | 37 | A | B | C | D |
| 8  | F | G | H | J | 18 | F | G | H | J | 28 | F | G | H | J | 38 | F | G | H | J |
| 9  | A | B | C | D | 19 | A | B | C | D | 29 | A | B | C | D | 39 | A | B | C | D |
| 10 | F | G | H | J | 20 | F | G | H | J | 30 | F | G | H | J | 40 | F | G | H | J |

### Test 4

- |    |   |   |   |   |    |   |   |   |   |    |   |   |   |   |    |   |   |   |   |
|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|
| 1  | A | B | C | D | 11 | A | B | C | D | 21 | A | B | C | D | 31 | A | B | C | D |
| 2  | F | G | H | J | 12 | F | G | H | J | 22 | F | G | H | J | 32 | F | G | H | J |
| 3  | A | B | C | D | 13 | A | B | C | D | 23 | A | B | C | D | 33 | A | B | C | D |
| 4  | F | G | H | J | 14 | F | G | H | J | 24 | F | G | H | J | 34 | F | G | H | J |
| 5  | A | B | C | D | 15 | A | B | C | D | 25 | A | B | C | D | 35 | A | B | C | D |
| 6  | F | G | H | J | 16 | F | G | H | J | 26 | F | G | H | J | 36 | F | G | H | J |
| 7  | A | B | C | D | 17 | A | B | C | D | 27 | A | B | C | D | 37 | A | B | C | D |
| 8  | F | G | H | J | 18 | F | G | H | J | 28 | F | G | H | J | 38 | F | G | H | J |
| 9  | A | B | C | D | 19 | A | B | C | D | 29 | A | B | C | D | 39 | A | B | C | D |
| 10 | F | G | H | J | 20 | F | G | H | J | 30 | F | G | H | J | 40 | F | G | H | J |

# FOR STUDENT

## Answer Sheet MODEL EXAM A

Directions: Mark one answer only for each question. Make the mark dark. Erase completely any mark made in error. (Additional or stray marks will be counted as mistakes.)

### Test 1

- |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D)  | 21 (A) (B) (C) (D) | 41 (A) (B) (C) (D) | 61 (A) (B) (C) (D) |
| 2 (F) (G) (H) (J)  | 22 (F) (G) (H) (J) | 42 (F) (G) (H) (J) | 62 (F) (G) (H) (J) |
| 3 (A) (B) (C) (D)  | 23 (A) (B) (C) (D) | 43 (A) (B) (C) (D) | 63 (A) (B) (C) (D) |
| 4 (F) (G) (H) (J)  | 24 (F) (G) (H) (J) | 44 (F) (G) (H) (J) | 64 (F) (G) (H) (J) |
| 5 (A) (B) (C) (D)  | 25 (A) (B) (C) (D) | 45 (A) (B) (C) (D) | 65 (A) (B) (C) (D) |
| 6 (F) (G) (H) (J)  | 26 (F) (G) (H) (J) | 46 (F) (G) (H) (J) | 66 (F) (G) (H) (J) |
| 7 (A) (B) (C) (D)  | 27 (A) (B) (C) (D) | 47 (A) (B) (C) (D) | 67 (A) (B) (C) (D) |
| 8 (F) (G) (H) (J)  | 28 (F) (G) (H) (J) | 48 (F) (G) (H) (J) | 68 (F) (G) (H) (J) |
| 9 (A) (B) (C) (D)  | 29 (A) (B) (C) (D) | 49 (A) (B) (C) (D) | 69 (A) (B) (C) (D) |
| 10 (F) (G) (H) (J) | 30 (F) (G) (H) (J) | 50 (F) (G) (H) (J) | 70 (F) (G) (H) (J) |
| 11 (A) (B) (C) (D) | 31 (A) (B) (C) (D) | 51 (A) (B) (C) (D) | 71 (A) (B) (C) (D) |
| 12 (F) (G) (H) (J) | 32 (F) (G) (H) (J) | 52 (F) (G) (H) (J) | 72 (F) (G) (H) (J) |
| 13 (A) (B) (C) (D) | 33 (A) (B) (C) (D) | 53 (A) (B) (C) (D) | 73 (A) (B) (C) (D) |
| 14 (F) (G) (H) (J) | 34 (F) (G) (H) (J) | 54 (F) (G) (H) (J) | 74 (F) (G) (H) (J) |
| 15 (A) (B) (C) (D) | 35 (A) (B) (C) (D) | 55 (A) (B) (C) (D) | 75 (A) (B) (C) (D) |
| 16 (F) (G) (H) (J) | 36 (F) (G) (H) (J) | 56 (F) (G) (H) (J) |                    |
| 17 (A) (B) (C) (D) | 37 (A) (B) (C) (D) | 57 (A) (B) (C) (D) |                    |
| 18 (F) (G) (H) (J) | 38 (F) (G) (H) (J) | 58 (F) (G) (H) (J) |                    |
| 19 (A) (B) (C) (D) | 39 (A) (B) (C) (D) | 59 (A) (B) (C) (D) |                    |
| 20 (F) (G) (H) (J) | 40 (F) (G) (H) (J) | 60 (F) (G) (H) (J) |                    |

### Test 2

- |                        |                        |                        |                        |
|------------------------|------------------------|------------------------|------------------------|
| 1 (A) (B) (C) (D) (E)  | 16 (F) (G) (H) (J) (K) | 31 (A) (B) (C) (D) (E) | 46 (F) (G) (H) (J) (K) |
| 2 (F) (G) (H) (J) (K)  | 17 (A) (B) (C) (D) (E) | 32 (F) (G) (H) (J) (K) | 47 (A) (B) (C) (D) (E) |
| 3 (A) (B) (C) (D) (E)  | 18 (F) (G) (H) (J) (K) | 33 (A) (B) (C) (D) (E) | 48 (F) (G) (H) (J) (K) |
| 4 (F) (G) (H) (J) (K)  | 19 (A) (B) (C) (D) (E) | 34 (F) (G) (H) (J) (K) | 49 (A) (B) (C) (D) (E) |
| 5 (A) (B) (C) (D) (E)  | 20 (F) (G) (H) (J) (K) | 35 (A) (B) (C) (D) (E) | 50 (F) (G) (H) (J) (K) |
| 6 (F) (G) (H) (J) (K)  | 21 (A) (B) (C) (D) (E) | 36 (F) (G) (H) (J) (K) | 51 (A) (B) (C) (D) (E) |
| 7 (A) (B) (C) (D) (E)  | 22 (F) (G) (H) (J) (K) | 37 (A) (B) (C) (D) (E) | 52 (F) (G) (H) (J) (K) |
| 8 (F) (G) (H) (J) (K)  | 23 (A) (B) (C) (D) (E) | 38 (F) (G) (H) (J) (K) | 53 (A) (B) (C) (D) (E) |
| 9 (A) (B) (C) (D) (E)  | 24 (F) (G) (H) (J) (K) | 39 (A) (B) (C) (D) (E) | 54 (F) (G) (H) (J) (K) |
| 10 (F) (G) (H) (J) (K) | 25 (A) (B) (C) (D) (E) | 40 (F) (G) (H) (J) (K) | 55 (A) (B) (C) (D) (E) |
| 11 (A) (B) (C) (D) (E) | 26 (F) (G) (H) (J) (K) | 41 (A) (B) (C) (D) (E) | 56 (F) (G) (H) (J) (K) |
| 12 (F) (G) (H) (J) (K) | 27 (A) (B) (C) (D) (E) | 42 (F) (G) (H) (J) (K) | 57 (A) (B) (C) (D) (E) |
| 13 (A) (B) (C) (D) (E) | 28 (F) (G) (H) (J) (K) | 43 (A) (B) (C) (D) (E) | 58 (F) (G) (H) (J) (K) |
| 14 (F) (G) (H) (J) (K) | 29 (A) (B) (C) (D) (E) | 44 (F) (G) (H) (J) (K) | 59 (A) (B) (C) (D) (E) |
| 15 (A) (B) (C) (D) (E) | 30 (F) (G) (H) (J) (K) | 45 (A) (B) (C) (D) (E) | 60 (F) (G) (H) (J) (K) |

# FOR STUDENT

Model Exam A

## Answer Sheet MODEL EXAM A

### Test 3

- |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D)  | 11 (A) (B) (C) (D) | 21 (A) (B) (C) (D) | 31 (A) (B) (C) (D) |
| 2 (F) (G) (H) (J)  | 12 (F) (G) (H) (J) | 22 (F) (G) (H) (J) | 32 (F) (G) (H) (J) |
| 3 (A) (B) (C) (D)  | 13 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 33 (A) (B) (C) (D) |
| 4 (F) (G) (H) (J)  | 14 (F) (G) (H) (J) | 24 (F) (G) (H) (J) | 34 (F) (G) (H) (J) |
| 5 (A) (B) (C) (D)  | 15 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 35 (A) (B) (C) (D) |
| 6 (F) (G) (H) (J)  | 16 (F) (G) (H) (J) | 26 (F) (G) (H) (J) | 36 (F) (G) (H) (J) |
| 7 (A) (B) (C) (D)  | 17 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 37 (A) (B) (C) (D) |
| 8 (F) (G) (H) (J)  | 18 (F) (G) (H) (J) | 28 (F) (G) (H) (J) | 38 (F) (G) (H) (J) |
| 9 (A) (B) (C) (D)  | 19 (A) (B) (C) (D) | 29 (A) (B) (C) (D) | 39 (A) (B) (C) (D) |
| 10 (F) (G) (H) (J) | 20 (F) (G) (H) (J) | 30 (F) (G) (H) (J) | 40 (F) (G) (H) (J) |

### Test 4

- |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D)  | 11 (A) (B) (C) (D) | 21 (A) (B) (C) (D) | 31 (A) (B) (C) (D) |
| 2 (F) (G) (H) (J)  | 12 (F) (G) (H) (J) | 22 (F) (G) (H) (J) | 32 (F) (G) (H) (J) |
| 3 (A) (B) (C) (D)  | 13 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 33 (A) (B) (C) (D) |
| 4 (F) (G) (H) (J)  | 14 (F) (G) (H) (J) | 24 (F) (G) (H) (J) | 34 (F) (G) (H) (J) |
| 5 (A) (B) (C) (D)  | 15 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 35 (A) (B) (C) (D) |
| 6 (F) (G) (H) (J)  | 16 (F) (G) (H) (J) | 26 (F) (G) (H) (J) | 36 (F) (G) (H) (J) |
| 7 (A) (B) (C) (D)  | 17 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 37 (A) (B) (C) (D) |
| 8 (F) (G) (H) (J)  | 18 (F) (G) (H) (J) | 28 (F) (G) (H) (J) | 38 (F) (G) (H) (J) |
| 9 (A) (B) (C) (D)  | 19 (A) (B) (C) (D) | 29 (A) (B) (C) (D) | 39 (A) (B) (C) (D) |
| 10 (F) (G) (H) (J) | 20 (F) (G) (H) (J) | 30 (F) (G) (H) (J) | 40 (F) (G) (H) (J) |

# Model Exam A

## ENGLISH TEST

45 MINUTES—75 QUESTIONS

**Directions:** The following test consists of 75 underlined words and phrases in context, or general questions about the passages. Most of the underlined sections contain errors and inappropriate expressions. You are asked to compare each with the four alternatives in the answer column. If you consider the original version best, choose letter A or F: NO CHANGE. For each question, blacken on the answer sheet the letter of the alternative you think best. Read each passage through before answering the questions based on it.

### Passage 1

(1)

Americans are living longer. The number of citizens sixty years or older totaled more than forty million in 1999, and one out of every nine Americans were sixty-five or older. Because advances in medical science and a more healthful lifestyle have lengthened the life spans of we Americans, more and more of us are finding that the time comes when we either no longer want to —or can— live on our own.

(2)

Unfortunately, in the past the words *retirement home* often brought to mind images of impersonal, lonely places. 4 However, conditions in retirement homes can vary, some homes earning awards for excellence in nursing care, and others earning citations for

1. A. NO CHANGE  
B. is  
C. have been  
D. was
2. F. NO CHANGE  
G. we, Americans,  
H. us Americans  
J. us, Americans,
3. A. NO CHANGE  
B. to or can live  
C. to, or can live  
D. to, or can, live
4. This idea (of “impersonal, lonely places”) could best be illustrated in this passage by employing which of the following writing strategies?  
F. Explaining a process  
G. Persuasion  
H. Defining  
J. Description

1 1 1 1 1 1 1 1 1 1 1 1

negligence. <sup>5</sup> Regulations regarding nursing homes

are becoming stricter than a research clinic, and it is  
<sup>6</sup> possible to find retirement conditions that are positive

and comfortable. <sup>7</sup>

(3)

But at the same time, the sad fact remains that, although most nursing homes are now licensed by the state, unclean and unhealthy conditions can still be  
<sup>8</sup> found. Even if the homes follow the licensing  
<sup>8</sup> procedures perfectly, the law does not guarantee a

warm friendly staff or atmosphere. <sup>9</sup> <sup>10</sup>

(4)

When looking at nursing homes, qualities should  
<sup>11</sup> be placed in priority order. Family members should  
<sup>11</sup> remember, as they look, that attitude toward patients—the morale and personal contact—can be just as

5. Which of the following writing strategies would permit the writer to present details about both housing extremes?

- A. Classifying and dividing
- B. Narration
- C. Comparison and contrast
- D. Persuasion

6. F. NO CHANGE

- G. stricter
- H. stricter than clinics
- J. stricter than they once were

7. Suppose that at this point in the passage the writer wanted to add more information about the impact of government regulations on retirement home conditions. Which of the following additions would be most relevant to the passage as a whole?

- A. A description and brief history of the agencies regulating nursing homes
- B. A bibliography of government reports and summaries published by regulating agencies
- C. A separate paragraph summarizing briefly the recent activity and success of regulating agencies
- D. Inclusion of a typical case report on an existing nursing institution

8. F. NO CHANGE

- G. one can still find unclean and unhealthy conditions.
- H. conditions can be found of uncleanliness and unhealthiness.
- J. many of them are unclean and unhealthy.

9. A. NO CHANGE

- B. warm - friendly
- C. warm: friendly
- D. warm, friendly

10. The writer could most effectively strengthen this paragraph by adding:

- F. a list of retirement homes found to be substandard in cleanliness.
- G. an anecdote about a woman who has lived in a home for 20 years.
- H. details and examples that typify unclean and unhealthy conditions.
- J. details of the licensing procedure that homes are required to complete.

11. A. NO CHANGE

- B. interested parties should place qualities
- C. qualities are certainly to be placed
- D. the patient should place qualities



**1 1 1 1 1 1 1 1 1 1 1**

important as new buildings, which, if they do not contain human warmth, can be little better than prisons.

(5)

For these reasons, it behooves us to take the time to carefully check out the nursing homes the family is considering. If members of the family cannot carry out all of the necessary steps, they should have a friend or relative help with the evaluation.

(6)

Not everyone who is in a nursing home requires the 24-hour skilled care offered there. Many residents are in homes because they can no longer care for themselves at home, and have nowhere else to go. However, alternatives to nursing homes do exist for people who need less care. 13

(7)

Home care services, which allow a patient to stay in a familiar environment rather than being placed in a nursing home, are an option if the elderly person needs only limited help, since home care causes far less disruption to normal life. Such services are provided by a variety of public, voluntary, and private agencies. 15

- 12. F. NO CHANGE
- G. best suits us
- H. is very important
- J. is not a bad idea

13. Which of the following means of discussing alternatives to 24-hour skilled nursing care would be most compatible with the methods employed so far in this passage?

- A. Detailed interviews with nursing home inmates who have experienced both forms of care
- B. Insertion of medical records of patients who have been moved from occasional care to 24-hour care
- C. A short paragraph mentioning several alternatives to 24-hour care
- D. Inclusion of a personal diary written by an elderly patient who made the change to permanent care

- 14. F. NO CHANGE
- G. services which
- H. services that
- J. services

15. Choose the sequence of paragraph numbers that makes the structure of the passage most logical.

- A. NO CHANGE
- B. 7, 2, 3, 1, 5, 4, 6
- C. 1, 2, 3, 5, 4, 6, 7
- D. 1, 2, 7, 3, 4, 5, 6

**GO ON TO THE NEXT PAGE.**



1 1 1 1 1 1 1 1 1 1 1 1

## Passage 2

Cultural activities form the loom on which the talents, skills, and dreams of individuals can sprout into

something colorful and distinctive—a play, pageant, art center, music festival, museum, library, garden, park—

to enrich community life. [18]

Cultural activities are central to Rural Areas Development, a nationwide effort by rural people and those in public service and private endeavors who work with it to enrich the quality of life. [20]

What may not be recognized by area leaders whose primary interest is in economic development is when cultural activities can be part of the steam that supplies the drive.

The first heritage festival of Lawrence County in Arkansas illustrates how a cultural activity may emerge from a ferment of economic development and, in turn, engender still newer ideas for farther social and economic gain, as well as other cultural activities. Lawrence County, a mainly rural area in northeastern Arkansas, had a population of 17,000 in nineteen-sixty. Its eastern half is fertile. The Black River runs beneath the delta, planted to rice, soybeans, and cotton, and the hills, where the farms are in livestock and poultry.

16. F. NO CHANGE  
G. can be woven  
H. can be sprouted  
J. can swell
17. A. NO CHANGE  
B. distinctive, a play, a pageant  
C. distinctive. A play, a pageant  
D. distinctive; a play, a pageant
18. Which of the following terms needs to be more carefully defined if the first paragraph is to carry substantial meaning?  
F. Pageant  
G. Cultural activities  
H. Loom  
J. Music festival
19. A. NO CHANGE  
B. they  
C. him  
D. them
20. Which of the following suggestions would improve the beginning of this passage?  
F. NO CHANGE  
G. OMIT the second paragraph.  
H. Combine the first and second paragraphs.  
J. Move the second paragraph to the end of the passage.
21. A. NO CHANGE  
B. is that  
C. is because  
D. is for
22. F. NO CHANGE  
G. even farther  
H. further  
J. furthermore
23. A. NO CHANGE  
B. nineteen-sixty A.D.  
C. 1960  
D. nineteen hundred and sixty

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Family-type farms employ a third of the work force. <sup>24</sup> 25

- 24. F. NO CHANGE  
G. Family type farms  
H. Family type-farms  
J. Family, type farms
- 25. This paragraph contains a major organizational problem. Which of the following critical statements best describes this problem?  
A. The paragraph does not contain enough specific details to support the main point.  
B. The first sentence of the paragraph presents an idea that is not developed in the body of the paragraph.  
C. No beginning thesis or topic is presented.  
D. There are many ideas in the paragraph, none of them developed.
- 26. F. NO CHANGE  
G. on the contrary  
H. however  
J. thus
- 27. A. NO CHANGE  
B. —nine in general farming, six in livestock and poultry production, one in dairy production, another in rice farming.  
C. —nine are general farmers, six as livestock and poultry producers, one a dairyman, another a ricegrower.  
D. —nine as general farmers, six livestock and poultry producers, one a dairyman, another a ricegrower.
- 28. F. NO CHANGE  
G. During its first two years, the Council addressed the economic advancement of the county.  
H. Addressing itself to the economic advancement of the county, the Council spent its first two years of existence.  
J. The Council spent its first two years of existence while addressing itself to the economic advancement of the county.
- 29. A. NO CHANGE  
B. area, it  
C. area. It  
D. area but it

Farmers <sup>26</sup> nevertheless made up the largest occupational group in the Lawrence County Development Council when it was organized in 1962. Seventeen members of the Council were farmers—<sup>27</sup> nine in general farming, six livestock and poultry producers, one a dairyman, another a ricegrower. Also on the Council <sup>27</sup> were an industrial worker, two bankers, and several local businessmen and homemakers.

Addressing itself to the economic advancement of the county, the Council spent its first two years of existence. <sup>28</sup> It supported a one-mill tax to guarantee construction of an industrial building in Walnut Ridge, the county seat and the largest town. It was instrumental in getting a comprehensive manpower inventory and economic base study of the area it <sup>29</sup> arranged for workshops in farm management. It helped leaders of Imboden to initiate a housing project for twenty

Model Exam A

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elderly persons. <sup>30</sup>

30. Which of the following is a major flaw in the structure and sense of this passage?
- F. It omits all mention of children; children are certainly an important part of rural America.
  - G. It fails to mention public works projects.
  - H. The whole point of the passage is that cultural activities can “supply the drive” for social and economic development, but the passage does not address that issue at all.
  - J. The passage does not list enough accomplishments of the Lawrence County Development Council.

### Passage 3

Of all the musical instruments produced by human skill, the three of which are the most distinguished <sup>31</sup> the violin, the piano, and the pipe organ. Of these, the violin still remains the instrument of the virtuoso. No method to play it <sup>32</sup> has yet been discovered <sup>33</sup> except by the slow and tedious process of learning it. It is the

instrument of the accomplish <sup>34</sup> musician. <sup>35</sup>

On the other hand, self-playing devices have been employed successfully with both the piano and the organ—but with this difference. Piano music derives

some of its essentialness <sup>36</sup> from the personality of the player. The touch of human fingers has never been exactly reproduced by mechanical devices. In some

31. A. NO CHANGE  
B. that are most distinguished  
C. of those that are distinguished  
D. most distinguished
32. F. NO CHANGE  
G. playing at  
H. in playing it  
J. of playing it
33. A. NO CHANGE  
B. invented  
C. divined  
D. developed
34. F. NO CHANGE  
G. accomplishing  
H. accomplished  
J. more accomplished
35. Which of the following writing strategies would permit the writer to present details about all three types of instruments?
- A. Classifying and dividing
  - B. Narration
  - C. Comparison and contrast
  - D. Persuasion
36. F. NO CHANGE  
G. pith  
H. quality  
J. life-blood

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compositions, however, the mechanical piano player approaches the pianist, although not by any means <sup>37</sup>

in all. 38

The pipe organ consequently is made for auto-<sup>39</sup> mated playing. There is virtually nothing the organist can do with his or her hands or feet that cannot be duplicated by mechanical devices. When an organ manual is touched, the resulting tone is the exact same.<sup>40</sup>

whether the touch be hard or soft, slow or quick. The<sup>41</sup> tone continues at the same volume until the key is<sup>42</sup> released. Brilliancy, variety, and other qualities are obtained by other sets of pipes, and these pipes are brought into play by pulling out stops. Such stops can be pulled by mechanical means just as effectively as by human fingers. If the organ music is correctly cut in the music roll, with all the stops, couplers, and swells operated at the proper places, the most acutest ear<sup>43</sup> cannot distinguish between the human organist and

37. A. NO CHANGE  
 B. approaches the sound of the pianist  
 C. comes close to the piano  
 D. typifies the piano
38. The writer could most effectively strengthen the passage at this point by adding:  
 F. documentation and detail to support opinions delivered as facts.  
 G. a review of all the orchestral instruments, including their musical ranges.  
 H. a discussion of the great violin makers of the past.  
 J. a detailed description of organ structure and mechanism.
39. A. NO CHANGE  
 B. on the contrary  
 C. to be sure  
 D. similarly
40. F. NO CHANGE  
 G. exact identical  
 H. same  
 J. equal
41. A. NO CHANGE  
 B. is  
 C. was  
 D. has been
42. F. NO CHANGE  
 G. soft, slow, or quick.  
 H. soft: slow or quick.  
 J. soft slow or quick.
43. A. NO CHANGE  
 B. the acute ear  
 C. the more acute ear  
 D. the most acute ear

Model Exam A

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the organist who is mechanical. <sup>44</sup> 45

44. F. NO CHANGE  
 G. the organist, who is mechanical.  
 H. the mechanical organist.  
 J. the organist who is a nonhuman.
45. The main purpose of this passage is to provide:  
 A. a discussion of the virtues of the mechanical organ.  
 B. a history of music.  
 C. a comparison of the violin, piano, and organ.  
 D. a general discussion of mechanized musical instruments.

### Passage 4

Until his death, Charles Darwin complained that even many of his scientific critics failed to grasp the meaning of his theory of selection; it is not unlikely <sup>46</sup> that if he were still alive the complaint would be

repeated. <sup>47</sup> Even where full comprehension of his theory of the causes of organic evolution has been reached, precise determination of the degree of its

adequacy—for adequate in great measure it surely is— <sup>48</sup> has not yet been attained. The generalization that underlies it is so broad, the facts by which it must be verified or limited are always, it seems, accumulating, <sup>49</sup> and the problems interrelated with it are so intricate, that finality with regard to it must be indefinitely postponed. That <sup>50</sup> must be left for the biology of the future.

Moreover, <sup>51</sup> there need be little hesitation in expressing an estimate of the great naturalist and his thought. They are obviously among the greatest

46. F. NO CHANGE  
 G. it is not likely  
 H. it is likely  
 J. it is probable
47. When a passage mentions that a famous figure *complained* about a fact or situation, how might the reader be given greater understanding of the personality and character of that subject?  
 A. By inclusion of a description of the occurrence  
 B. By quoted examples of what he or she actually said  
 C. By references to how other persons present at the time reported the conversation  
 D. By a speculative commentary on what he or she meant
48. F. NO CHANGE  
 G. adequacy; for  
 H. adequacy, for  
 J. adequacy for
49. A. NO CHANGE  
 B. are so always accumulating  
 C. are so constantly accumulating  
 D. are accumulating
50. F. NO CHANGE  
 G. This  
 H. Those  
 J. That judgment
51. A. NO CHANGE  
 B. In addition  
 C. In other words,  
 D. However,

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intellectual forces of the early twentieth century, as they were of the nineteenth. Notwithstanding certain limitations, which Darwin himself unduly emphasizes,<sup>52</sup> he was one of the greatest of men intellectually, and, without qualification, one of the most attractive of personalities; this<sup>53</sup> must always remain true, whatever may be the ultimate verdict of science in regard to details of his hypotheses. Persons thus grandly molded have nothing to fear from the perspective of time. He was one cool cucumber at one of history's junctures.<sup>54</sup>

Darwin insisted that the principle of natural selection is only one of the causes of evolution of species, "the main but not the exclusive means of modification,"<sup>55</sup> and he was also profoundly aware of the evolutionary importance of the underlying problems of variability, heredity, and isolating<sup>56</sup> that

has occupied<sup>57</sup> so absorbingly the attention of the post-Darwinians. Naturalists, almost without exception, no longer doubt that natural selection, as expounded by him, is a cause of the evolution of species, and a most important one, and stood<sup>58</sup> as a general law that explains

the causation of organic evolution. This view will be supported by the biology of the future, if Darwin's<sup>59</sup> place<sup>59</sup> in the history of science cannot be far

below that of Newton. 60

52. F. NO CHANGE  
G. emphasize  
H. emphasized  
J. had emphasized
53. A. NO CHANGE  
B. this assessment  
C. this alone  
D. this quality
54. F. NO CHANGE  
G. He has been one cool cucumber at one of history's junctures.  
H. He is one cool cucumber at one of history's junctures.  
J. OMIT this sentence.
55. A. NO CHANGE  
B. modification" and  
C. modification." And  
D. modification;" and
56. F. NO CHANGE  
G. isolatability  
H. isolation  
J. isolate
57. A. NO CHANGE  
B. had occupied  
C. has been occupied  
D. have occupied
58. F. NO CHANGE  
G. has stood  
H. stands  
J. will have stood
59. A. NO CHANGE  
B. If this view is supported by the biology of the future, Darwin's place  
C. This view will be supported by the biology of the future, although Darwin's place  
D. Nevertheless, this view is supported by the biology of the future, when Darwin's place
60. Readers are likely to regard the passage as best described by which of the following terms?  
F. Biographical  
G. Confessional  
H. Laudatory  
J. Inspirational

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## Passage 5

Almost everywhere spread through the British Isles  
61  
 are to be found antiquities. These are carefully marked

on governmental, and many private maps  
62

and historians describe them in publicly available  
63  
 guides. Governmental agencies, the National Trust,  
 and private landlords are most accommodating in  
 permitting visits to these unattended sites, most of  
which are unsupervised yet immaculate. 64 65

With interesting exceptions, the rock graphics of  
 the British Isles are a collection of pits, rings, and

grooves, as well as carefully-carved symbols of  
66  
 Neolithic power (axheads, fertility symbols, etc.) and  
 roughly sculpted monoliths. The pit, ring, and groove  
 sites usually are found on horizontal surfaces, because  
67  
 many power symbols are found on vertical surfaces of

menhirs (upright monoliths) lintels, and the walls of  
68

constructions. In the more than five hundred megalithic  
69  
 stone constructions, many have a number of menhirs  
 whose natural shape has been abetted by human enter-  
 prise into a variety of shapes. Stonehenge is the

61. A. NO CHANGE  
 B. widely dispersed through  
 C. throughout  
 D. all over, in nook and crook
62. F. NO CHANGE  
 G. governmental; and many private  
 H. governmental—and many private  
 J. governmental and many private
63. A. NO CHANGE  
 B. and described  
 C. and describing  
 D. and descriptively
64. F. NO CHANGE  
 G. most of which are unsupervised although  
 immaculate.  
 H. most of which are immaculate.  
 J. most of which are unsupervised.
65. Suppose this passage were written for an audience  
 that was unfamiliar with antiquities and British  
 history. The writer could most effectively  
 strengthen the passage by:
- A. including a brief summary of the biographies  
 of British monarchs.  
 B. describing with detail and illustration just  
 what an *antiquity* is.  
 C. supplying a current map of England.  
 D. defining in great detail the term *National  
 Trust*.
66. F. NO CHANGE  
 G. carefully, carved  
 H. carefully carved  
 J. carefully and carved
67. A. NO CHANGE  
 B. while  
 C. although  
 D. yet
68. F. NO CHANGE  
 G. monoliths),  
 H. monoliths,)  
 J. monoliths,
69. A. NO CHANGE  
 B. 500  
 C. 5 hundred  
 D. five-hundred



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incorporating universal structure by which one can discern many of the features found elsewhere. In Scotland

are found a special series of menhirs that depict symbols, both pre-Christian and Christian, as well as human

figures, angels, and scenes. 72

Surely one of the earliest stones to be erected is the one near present-day Edinburgh in an area that

came under Britannic control by A.D. 480. 73 Christianity came to this region between the fifth and the seventh centuries: St. Ninian founded the Candida Case monastery near Whithorn on the Solway in A.D. 379–398; St. Oran established holy places in Iona,

Mull, and Tiree before A.D. 548. 74 The form of Christianity was the monastic and hermitic type traditionally called Celtic, which demanded poverty and

obedience from its clergy, who were all monks. 75

70. F. NO CHANGE  
G. with which  
H. for which  
J. in which

71. A. NO CHANGE  
B. was found  
C. has always been found  
D. is found

72. Readers are likely to regard the passage as best described by which of the following terms?  
F. Fictional  
G. Scholarly  
H. Dramatic  
J. Persuasive

73. How can this paragraph be changed so that it will be more meaningful and understandable to a young reader?

- A. Include a chart of rock types, listing origins, scientific names, and descriptions.  
B. Provide a detailed description of many European prehistoric stoneworks.  
C. Describe more fully the one stone mentioned in the first sentence.  
D. Add a comparison of Easter Island monoliths with the Stonehenge monuments.

74. Look over the structure of this paragraph as it has unfolded so far. With which one of the following characterizations do you agree?

- F. It is surely and soundly organized, consisting of a general statement at the beginning that is supported throughout.  
G. It is not organized very well. It begins with a statement about monastic orders, but does not develop that idea.  
H. It is not organized very well. It begins with a statement about a stone, but then switches to the history of Christianity in the region.  
J. It is not organized very well. It begins with a brief history of Britannic rule, and then seems to shift to a history of Pict temples.

75. This paragraph would be strengthened by:

- A. supplying more details about the Christian leaders.  
B. beginning the paragraph with a general statement that encompasses the details presented in the body.  
C. including a short lesson on rock formation.  
D. defining the hermitic form of Christianity.



If there is still time remaining, you may review your answers.

2 2 2 2 2 2 2 2 2 2 2

## MATHEMATICS TEST

60 MINUTES—60 QUESTIONS

*Directions:* After solving each problem, darken the appropriate space on the answer sheet. Do not spend too much time on any one problem. Make a note of the ones that seem difficult, and return to them when you finish the others. Assume that the word *line* means "straight line," that geometric figures are not necessarily drawn to scale, and that all geometric figures lie in a plane.

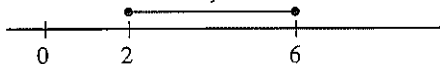
## DO YOUR FIGURING HERE

- Which of the following statements about the subsets of real numbers is true?
  - Every integer is a whole number.
  - All rational numbers are integers.
  - 0 is not a real number.
  - 3.14 is a rational number.
  - All integers are negative.
- Jane's score on her first test was 72. On her second test she received a score of 81. What percent increase did she have?
  - 9%
  - $11\frac{1}{9}\%$
  - 12.5%
  - $88\frac{8}{9}\%$
  - 112.5%
- $4^2 - 3 - 5 \cdot 8 - 2[(-3) - (-7)] = ?$ 
  - 192
  - 7
  - 43
  - 33
  - 35
- Four boxes, each one  $2\frac{3}{8}$  feet high, are stacked in a room with a 10-foot ceiling. How much space is there between the top box and the ceiling?
  - 2 feet
  - 1 foot
  - 6 inches
  - 1 inch
  - None of these

2 2 2 2 2 2 2 2 2 2 2

DO YOUR FIGURING HERE

5. Which of the following inequalities corresponds to the graph?



- A.  $x \leq 6$   
 B.  $x \geq 2$   
 C.  $|x - 2| \leq 6$   
 D.  $|x - 4| \leq 2$   
 E.  $|x - 6| = 2$
6. What is the lowest common denominator of the fractions  $\frac{5}{4x^2y}$ ,  $\frac{7}{6xy^2}$ , and  $\frac{-4}{15xy}$ ?
- F.  $xy$   
 G.  $30xy$   
 H.  $60xy$   
 J.  $360x^2y^2$   
 K.  $60x^2y^2$
7. What is the complete factorization of the polynomial  $4x^3 - 24x^2 + 36x$ ?
- A.  $4x(x - 3)^2$   
 B.  $x(2x - 6)^2$   
 C.  $x(4x - 12)(x - 3)$   
 D.  $x(4x^2 - 24x + 36)$   
 E.  $4x(x^2 - 6x + 9)$
8. Which of the following numbers is composite?
- F. 1  
 G. 43  
 H.  $\frac{2}{3}$   
 J. 57  
 K. 83
9. If  $a = -3$  and  $b = 4$ , then  $ab^2 - (a - b) = ?$
- A. 151  
 B. 55  
 C. -49  
 D. -47  
 E. -41

GO ON TO THE NEXT PAGE.

2 2 2 2 2 2 2 2 2 2 2

DO YOUR FIGURING HERE

17. Which of the following is an arithmetic sequence?

- A.  $\frac{1}{2}, \frac{1}{4}, \frac{1}{6}, \frac{1}{8}, \dots$   
 B. 2, 4, 8, 16, ...  
 C. 2, 5, 10, 17, ...  
 D. 5, 11, 17, 23, ...  
 E. -1, 3, -9, 27, ...

18. What is the value of  $i^{55}$ ?

- F. 1  
 G.  $i$   
 H. -1  
 J.  $-i$   
 K. 0

19. The Science Club has ten members and wants to form an election committee of four people. If everyone in the club is eligible to be on the committee, how many different committees can be formed?

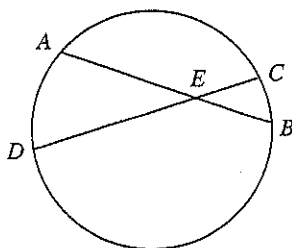
- A. 1  
 B. 40  
 C. 210  
 D. 5040  
 E. 3,628,800

20. Which of the following trigonometric equations is false for all  $x$ ?

- F.  $\sin x = \frac{2}{\sqrt{3}}$   
 G.  $\tan x = -100$   
 H.  $\sec x = \frac{\sqrt{3}}{4}$   
 J.  $\cos^2 x + \sin^2 x = 1$   
 K.  $\cos x = -0.1439$

21. In the diagram, two chords of the circle intersect at point  $E$ . If  $AE = 3$ ,  $DE = 5$ , and  $CE = 2$ , what is the length of  $BE$ ?

- A.  $1\frac{1}{5}$   
 B.  $3\frac{1}{3}$   
 C. 4  
 D.  $7\frac{1}{2}$   
 E.  $8\frac{1}{3}$



2 2 2 2 2 2 2 2 2 2 2

## DO YOUR FIGURING HERE

22. What is the probability of drawing a heart from a well-shuffled standard deck of playing cards?
- F.  $\frac{1}{4}$   
 G.  $\frac{1}{52}$   
 H.  $\frac{1}{13}$   
 J.  $\frac{4}{13}$   
 K. 1
23. Which expression is equal to  $x - [3x - (1 - 2x)]$  when completely simplified?
- A.  $-3x^2 + 2x - 1$   
 B.  $-4x + 1$   
 C. 1  
 D.  $-1$   
 E.  $-4x - 1$
24. If  $f(x) = 2x - 5$  and  $g(x) = 1 + x^2$ , then what is equal to  $f(g(3))$ ?
- F.  $2\sqrt{2} - 5$   
 G. 2  
 H. 10  
 J. 15  
 K. 16
25. If the length of a rectangle is 1 foot less than twice its width and its perimeter is 34 feet, what is the length of the rectangle in feet?
- A. 6  
 B. 11  
 C.  $11\frac{2}{3}$   
 D.  $22\frac{1}{3}$   
 E. None of these
26. If  $2 \log_3 x - \frac{1}{2} \log_3 y + \log_3 z$  were written as a single logarithm, to what would it be equal?
- F.  $\log_3 \frac{x^2z}{\sqrt{y}}$   
 G.  $\log_3 \frac{x^2}{z\sqrt{y}}$   
 H.  $\log_3 \frac{xz}{y}$   
 J.  $\log_3 \frac{4xz}{y}$   
 K.  $\log_3 (x^2 - \frac{y}{2} + z)$

GO ON TO THE NEXT PAGE.

DO YOUR FIGURING HERE

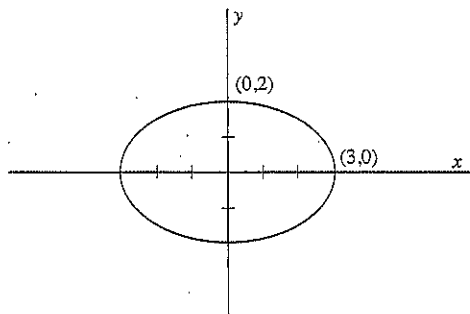
27. Which expression would be appropriate to complete the following equation in order for the equation to illustrate the commutative property of addition:  $5(3 + 0) = ?$

- A.  $5(3)$
- B.  $(3 + 0)5$
- C.  $5(0 + 3)$
- D.  $5(3) + 5(0)$
- E.  $5(3) + 0$

28. In a class of 27 students,  $\frac{2}{3}$  are male. Five-sixths of the males in the class received a grade of C. How many male students received a grade of C?

- F. 6
- G. 12
- H. 15
- J. 18
- K. 24

29. Which equation corresponds to the graph?



- A.  $\frac{x^2}{9} + \frac{y^2}{4} = 1$
- B.  $\frac{x^2}{9} - \frac{y^2}{4} = 1$
- C.  $\frac{x^2}{3} + \frac{y^2}{2} = 1$
- D.  $\frac{y^2}{4} - \frac{x^2}{9} = 1$
- E.  $(x - 3)^2 + (y - 2)^2 = 0$

30. What is the solution set for this system of equations?

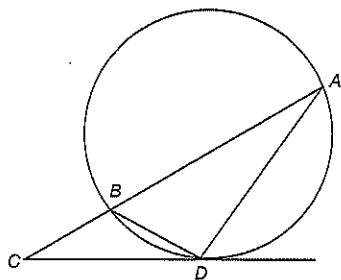
$$\begin{aligned} x + z &= 6 \\ y + z &= 1 \\ 2z &= 8 \end{aligned}$$

- F.  $\{(2, -3, 8)\}$
- G.  $\{(2, -3, 4)\}$
- H.  $\left\{\left(1, -\frac{3}{2}, 4\right)\right\}$
- J.  $\{(1, 1, 2)\}$
- K.  $\{ \}$

2 2 2 2 2 2 2 2 2 2 2

DO YOUR FIGURING HERE

31. What is the solution set of  $\sqrt{x+1} = x-1$ ?
- A.  $\{0, 1\}$
  - B.  $\{3\}$
  - C.  $\{0\}$
  - D.  $\{0, 3\}$
  - E.  $\{-1, 1\}$
32. Which expression is equivalent to  $\sqrt[3]{-12a^4b^2} \cdot \sqrt[3]{-6a^2b^2}$  in simplest radical form?
- F.  $\sqrt[3]{72a^6b^4}$
  - G.  $-2a^2b \sqrt[3]{9b}$
  - H.  $2a^2b \sqrt[3]{9b}$
  - J.  $a^2b \sqrt[3]{72b}$
  - K.  $2 \sqrt[3]{9a^6b^4}$
33. Given  $\overline{CD}$  is tangent,  $m \angle ABD = 62^\circ$  and  $m \angle BDC = 28^\circ$ , what is the measure of  $\angle ADB$ ?



- A.  $90^\circ$
  - B.  $100^\circ$
  - C.  $118^\circ$
  - D.  $152^\circ$
  - E.  $180^\circ$
34. What is the solution set of the following system of equations?

$$\begin{cases} 2x - 5y = 13 \\ 3x + 2y = 10 \end{cases}$$

- F.  $\left\{ \left( \frac{4}{19}, \frac{4}{19} \right) \right\}$
- G.  $\{(-3, -1)\}$
- H.  $\{(4, -1)\}$
- J.  $\{(-1, -3)\}$
- K. None of these



2

2

2

2

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2

2

2

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2

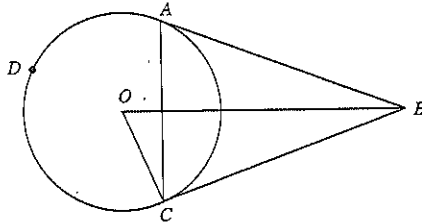
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DO YOUR FIGURING HERE

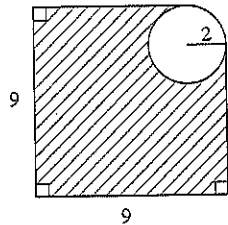
35. What is the solution to this system of equations?

$$\begin{cases} 2x + 3y = 12 \\ y = -\frac{2}{3}x + 5 \end{cases}$$

- A.  $\{0\}$   
 B.  $\{(0, 0)\}$   
 C.  $\{(-3, 2)\}$   
 D.  $\{\}$   
 E. All points on the line.
36. If the measure of arc  $ADC = 200^\circ$  and  $\overline{AB}$  and  $\overline{BC}$  are tangent to circle  $O$ , what is the measure of  $\angle OCA$ ?



- F.  $40^\circ$   
 G.  $20^\circ$   
 H.  $10^\circ$   
 J.  $8^\circ$   
 K.  $5^\circ$
37. Suppose that a circular region (radius 2 cm) is cut from a square with sides 9 cm, leaving the shaded region shown in the diagram. What is the area of the shaded region?



- A.  $81 - 4\pi$   
 B.  $77 - 3\pi$   
 C.  $78 - 4\pi$   
 D.  $80 - 4\pi$   
 E.  $81 - 3\pi$
38. Which statement is always true concerning an obtuse angle?
- F. It measures less than  $90^\circ$ .  
 G. It measures greater than  $180^\circ$ .  
 H. It is the supplement of another obtuse angle.  
 J. There can be only one in a triangle.  
 K. There cannot be one in a quadrilateral.

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DO YOUR FIGURING HERE

39. What is the simplified form of the complex fraction

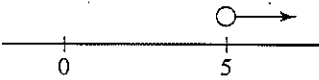




$$\frac{\frac{x}{y} - \frac{y}{x}}{\frac{1}{x} - \frac{1}{y}}$$

- A.  $x + y$
- B.  $x - y$
- C.  $-x - y$
- D.  $\frac{x^2 - y^2}{y - x}$
- E.  $\frac{x^2 - y^2}{x - y}$

40. Which of the following statements is true?

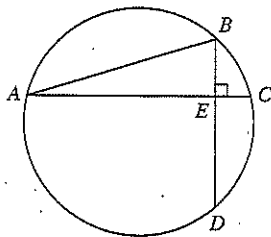
- F. All isosceles triangles are similar.
- G. If two lines are cut by a transversal, the alternate interior angles are equal.
- H. All circles are congruent.
- J. The angles of a triangle are supplementary.
- K. All four of the above are false.

41. Which of the following is the graph of the solution set of the inequality  $|x - 3| > 2$ ?

- A. 
- B. 
- C. 
- D. 
- E. 

42. If  $\overline{AC} \perp \overline{BD}$ ,  $DE = 2$ ,  $BE = 1$ ,  $\overline{EC} = \frac{1}{2}$ , what is the length of  $\overline{AB}$ ?

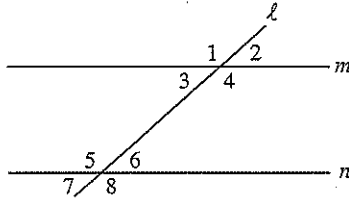
- F.  $\sqrt{17}$
- G. 4
- H.  $\sqrt{5}$
- J. 3
- K. 2



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DO YOUR FIGURING HERE

43. In the diagram, lines  $m$  and  $n$  in a plane are cut by transversal  $l$ . Which statement would allow the conclusion that  $m \parallel n$ ?



- A.  $m \angle 1 = m \angle 4$   
 B.  $\angle 3$  and  $\angle 4$  are supplementary  
 C.  $m \angle 3 = m \angle 8$   
 D.  $m \angle 3 = m \angle 6$   
 E.  $\angle 1$  and  $\angle 6$  are complementary
44. How many terms does the complete expansion of  $(x + 2y)^9$  have?
- F. 8  
 G. 9  
 H. 10  
 J. 18  
 K. 81
45. Which of the following is NOT a rational number?
- A. 0.5  
 B.  $0.\bar{5}$   
 C.  $\sqrt{48}$   
 D.  $\sqrt{49}$   
 E. 15%
46. What is the period of the following function:  
 $y = 2 \tan(3x - \frac{\pi}{2})$ ?
- F. 1  
 G.  $\pi$   
 H.  $\frac{\pi}{3}$   
 J.  $\frac{\pi}{2}$   
 K.  $\frac{2\pi}{3}$
47. In a windstorm a tower was bent at a point one fourth of the distance from the bottom. If the top of the tower now rests at a point 60 feet from the base, how tall, in feet, was the tower?
- A. 100  
 B. 80  
 C.  $60\sqrt{2}$   
 D.  $60\sqrt{3}$   
 E.  $240\sqrt{2}$

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## DO YOUR FIGURING HERE

48. Which of the following is NOT the equation of a conic section?

F.  $2x^2 + 5y^2 - 2x + 7y - 8 = 0$

G.  $y = 3x^2 + 7x - 3$

H.  $y = 2^x + 5$

J.  $\frac{x^2}{9} - \frac{(y-3)^2}{16} = 1$

K.  $(x-2)^2 + (y+3)^2 = 25$

49. If  $\cos \theta = \frac{-1}{2}$  and  $\theta$  is in quadrant III, what is the value of  $\sin 2\theta$ ?

A.  $\frac{1}{2}$

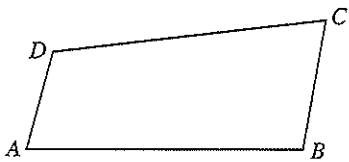
B.  $\frac{-1}{2}$

C.  $\frac{\sqrt{3}}{2}$

D.  $\frac{-\sqrt{3}}{2}$

E.  $-1$

50. Given quadrilateral  $ABCD$ , which statement would allow the conclusion that  $ABCD$  is a parallelogram?



F.  $m \angle A = m \angle C$

G.  $AD = BC$

H.  $m \angle A + m \angle D = 180^\circ$

J.  $AD \parallel BC$

K. None of these

51. What is the standard form of the equation of the line perpendicular to the graph of  $2x + 3y = 7$  at point  $(2, 1)$ ?

A.  $x = 2$

B.  $2x - 3y = 1$

C.  $3x - 2y = 4$

D.  $3x + 2y = 8$

E.  $y = 1$

52. Which of the following is NOT a real number?

F.  $\frac{0}{5}$

G.  $3 - 9$

H.  $\sqrt{25}$

J.  $-\sqrt{7}$

K.  $\sqrt{-4}$

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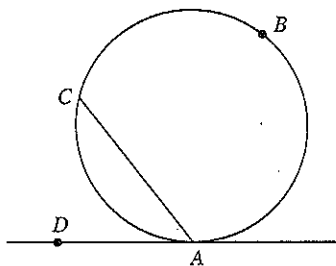
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DO YOUR FIGURING HERE

53. What is the degree of the polynomial  $2^2x^2yz - 2^2x^3yz - 3$ ?

A. 0  
 B. 4  
 C. 5  
 D. 6  
 E. 8

54. Tangent line  $\overline{AD}$  and chord  $\overline{AC}$  intersect at point A. If the measure of arc  $ABC = 220^\circ$ , what is the measure of  $\angle CAD$ ?



- F.  $220^\circ$   
 G.  $110^\circ$   
 H.  $140^\circ$   
 J.  $70^\circ$   
 K.  $35^\circ$
55. Which of the following is NOT equal to the others?
- A. 0.015  
 B.  $1.5 \times 10^{-2}$   
 C. 1.5%  
 D.  $\frac{3}{200}$   
 E.  $(0.3)(0.005)$

56. What is the simplified form of  $\frac{6}{4-\sqrt{2}}$ ?

F.  $12 + 3\sqrt{2}$   
 G.  $\frac{3\sqrt{2}}{2\sqrt{2}-1}$   
 H.  $\frac{4+\sqrt{2}}{3}$   
 J.  $\frac{12+3\sqrt{2}}{7}$   
 K.  $\frac{24+6\sqrt{2}}{14}$

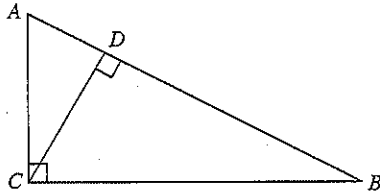
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DO YOUR FIGURING HERE

57. Which of the following is equivalent to  $|x - 5| > 2$ ?

- A.  $x > 7$
- B.  $x + 5 > 2$
- C.  $x < 3$
- D.  $x > 7$  or  $x < 3$
- E.  $3 < x < 7$

58. In  $\triangle ABC$  ( $\angle C$  is the right angle),  $\overline{CD}$  is drawn perpendicular to  $\overline{AB}$ . If  $AD = 3$  and  $BD = 12$ , what is the length of  $\overline{DC}$ ?



- F. 6
- G.  $3\sqrt{5}$
- H.  $7\frac{1}{2}$
- J. 9
- K.  $4\frac{1}{2}$

59. Which of the following expressions is NOT equal to  $\cos(-512^\circ)$ ?

- A.  $\cos 208^\circ$
- B.  $-\cos 28^\circ$
- C.  $\sin(-62^\circ)$
- D.  $\sin 152^\circ$
- E.  $\cos 152^\circ$

60. The gravitational attraction between two bodies varies inversely as the square of the distance between them. If the force of attraction is 64 pounds when the distance between the bodies is 9 feet, what is the force, in pounds, when they are 24 feet apart?

- F. 5184
- G. 729
- H. 216
- J. 24
- K. 9



If there is still time remaining, you may review your answers.



## READING TEST

35 MINUTES—40 QUESTIONS

**Directions:** This test consists of four passages, each followed by ten multiple-choice questions. Read each passage and then pick the best answer for each question. Fill in the spaces on your answer sheet that correspond to your choices. Refer to the passage as often as you wish while answering the questions.

### Passage 1—Prose Fiction

*This passage, adapted from the short story "Gaspar Ruiz: A Romantic Tale" by Joseph Conrad, takes place after Gaspar, a rebel soldier, has been accused of fighting for the Royalists.*

Gaspar Ruiz, condemned to death as a deserter, was not thinking either of his native place or of his parents, to whom he had been a good son on account of the mildness of his character and the great strength of his limbs. The practical advantage of this last was made still more valuable to his father by his obedient disposition. Gaspar Ruiz had an acquiescent soul.

But it was stirred now to a sort of dim revolt by his dislike to die the death of a traitor. He was not a traitor. He said again to the sergeant: "You know I did not desert, Esteban. You know I remained behind amongst the trees with three others to keep the enemy back while the detachment was running away!"

Lieutenant Santierra, little more than a boy at the time, and unused as yet to the sanguinary imbecilities of a state of war, had lingered nearby, as if fascinated by the sight of these men who were to be shot presently—"for an example"—as the *Commandante* had said.

The sergeant, without deigning to look at the prisoner, addressed himself to the young officer with a superior smile.

"Ten Men would not have been enough to make him a prisoner, *mi tenente*. Moreover, the other three rejoined the detachment after dark. Why should he, unwounded and the strongest of them all, have failed to do so?"

"My strength is as nothing against a mounted man with a lasso," Gaspar Ruiz protested eagerly. "He dragged me behind his horse for half a mile."

At this excellent reason the sergeant only laughed contemptuously. The young officer hurried away after the *Commandante*.

Presently the adjutant of the castle came by. The sergeant learned from him that the condemned men would

not be shot till sunset. He begged then to know what he was to do with them in the meantime.

The adjutant looked savagely round the courtyard and, pointing to the door of a small dungeon-like guard-room, receiving light and air through one heavily barred window, said: "Drive the scoundrels in there."

The sergeant, tightening his grip upon the stick he carried by virtue of his rank, executed this order with alacrity and zeal. He hit Gaspar Ruiz, whose movements were slow, over his head and shoulders. Gaspar Ruiz stood still for a moment, biting his lip thoughtfully—then followed the others without haste. The door was locked, and the adjutant carried off the key.

By noon the heat of that vaulted place had become unbearable. The prisoners crowded towards the window, begging their guards for a drop of water; but the soldiers remained lying in indolent attitudes wherever there was a little shade under a wall, while the sentry sat with his back against the door smoking a cigarette. Gaspar Ruiz had pushed his way to the window. His capacious chest needed more air than the others; his big face pressed close to the bars seemed to support the other faces crowding up for breath. From moaned entreaties they had passed to desperate cries. The tumultuous howling of those thirsty young men obliged a young officer just then crossing the courtyard to shout, "Why don't you give some water to these prisoners?"

The sergeant, with an air of surprised innocence, excused himself by the remark that all those men were condemned to die in a very few hours.

Lieutenant Santierra stamped his foot. "They are condemned to death, not to torture," he shouted. "Give them some water at once."

Impressed by this appearance of anger, the soldiers bestirred themselves, and the sentry, snatching up his musket, stood to attention.

But when a couple of buckets were found and filled from the well, it was discovered that they could not be passed through the bars, which were set too close. The soldiers were not equipped with canteens. A small tin cup



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75 was found, but its approach to the opening caused such a commotion, such yells of rage and pain in the vague mass of limbs behind the straining faces at the window, that Lieutenant Santierra cried out hurriedly, “No, no—you must open the door, sergeant.”

80 The sergeant, shrugging his shoulders, explained that he had no right to open the door even if had the key. But he had not the key. The adjutant of the garrison kept the key. Those men were giving much unnecessary trouble, since they had to die at sunset in any case. Why they had not been shot early in the morning he could not  
85 understand.

Lieutenant Santierra kept his back studiously to the window. It was at his earnest solicitations that the *Commandante* had delayed the execution. This favor had been granted to him in consideration of his distinguished  
90 family and of his father’s high position amongst the chiefs of the Republican party. Lieutenant Santierra believed that the commanding General would visit the fort sometime in the afternoon, and he ingeniously hoped that his naive intercession would induce that  
95 severe man to pardon some, at least, of those criminals. In the revulsion of his feeling his interference stood revealed now as guilty and futile meddling.

- Based on information in the passage, Gaspar Ruiz is alleged to have committed treason because he:
  - ran away at the height of a battle.
  - stayed up all night.
  - got separated from his detachment.
  - lassoed a soldier riding on a horse.
- The narrator’s assertion that Gaspar had been a “good son” (line 3) is based on which of Gaspar’s characteristics?
  - His willingness to work hard
  - A strong desire to help others
  - An agreeable nature
  - His ambition to be a success in life
- Considering the events in the entire passage, Sergeant Esteban’s attitude toward Lieutenant Santierra can best be described as a combination of:
  - discretion and prudence.
  - admiration and respect.
  - cynicism and contempt.
  - antagonism and insolence.
- That Gaspar and the other men are to be shot “for an example” (lines 17–18) suggests which of the following about the *Commandante*?
  - He wants to raise the morale of his troops.
  - He is concerned that other soldiers may try to desert.
  - He is uncertain about Gaspar’s guilt.
  - He thinks that Gaspar and the others need to be taught a lesson.
- The *Commandante* delays the executions at the behest of Lieutenant Santierra because:
  - of Santierra’s connections.
  - Santierra made a strong and convincing argument.
  - he is not convinced that the men are guilty.
  - he wanted to impress the commanding general.
- All of the following characters are represented as harsh, brutal military men EXCEPT:
  - Esteban.
  - Lieutenant Santierra.
  - the adjutant.
  - the *Commandante*.
- Based on the passage, it is reasonable to infer that the guards assigned to watching the prisoners were:
  - fearful of the men locked up in the guardhouse.
  - indifferent to the suffering of the men.
  - confident that Gaspar and the other men were guilty.
  - anxious to release the men as soon as they were given the order to do so.
- The details and events in the passage suggest that Lieutenant Santierra:
  - has quickly grown accustomed to military life.
  - has won the respect of his commanding officer.
  - will soon receive a promotion.
  - has values that differ from those of the other men in his detachment.
- It can be reasonably be inferred that Santierra feels “guilty” (line 97) because:
  - his interference in the case caused the prisoners to suffer needlessly.
  - he has failed to win a pardon for the condemned men.
  - he lost his temper in ordering water for the men locked inside the guardhouse.
  - of his inadequacy as an officer and a leader of men.
- Which of the following events does the passage suggest is the immediate result of Santierra’s hurrying away (line 30)?
  - The sergeant laughs contemptuously.
  - The adjutant informs the sergeant that the prisoners will die at sunset.
  - The adjutant utters, “Drive the scoundrels in there.”
  - The sergeant hits Gaspar on the head and shoulders with a stick.

GO ON TO THE NEXT PAGE.



## Passage 2—Social Studies

This passage is adapted from an article published by the Naval Historical Center, an agency affiliated with the U.S. Department of the Navy.

Though it now seems merely a folk-memory, the Influenza epidemic of 1918 was the third greatest plague in the history of mankind. The most devastating epidemic since the Middle Ages, it took over 21 million lives and affected over half the world's population. Logically, one would think that an epidemic of this proportion would have left an indelible imprint on the American people. In the United States alone, 550,000 died within the 16-week period from October 1918 to February 1919. Yet, it never inspired awe, not in 1918 and not since.

As one searches for explanation as to why Americans took little notice of the epidemic and then quickly forgot what they did notice, a mystery and a paradox emerge. The mystery was the complacency the American people displayed as a group toward the epidemic. The paradox was the common individual's clear acknowledgment that the epidemic was the most influential experience of his life.

To understand this lack of attention, one must look at the years preceding the outbreak. Lethal epidemics were not as unexpected and therefore not as impressive as they might be in the more technologically advanced surroundings of today. The terror of typhoid, yellow fever, diphtheria, and cholera were well within living memory. Most Americans had lived through the typhoid and small pox epidemics of 1876 and 1890.

Beyond this complacent acceptance of epidemics as a part of life, one must rely almost entirely on speculation in finding further answers.

If the "Spanish Influenza" had settled down as a permanent source of misery in the country, then possibly Americans might have granted this variety of the flu the notoriety it deserved. But the devastation came, scooped up its victims, and all but disappeared within a few short months. If the flu had been a disease that evoked a memory of terror, Americans might have panicked. This complete absence of fear, which until 1918 had inflicted no more than a few uncomfortable days of cold-like symptoms, is reflected in a statement by A.J. McLaughlin of the U.S. Public Health Service: "It is remarkable to see the placidity by which the people have generally taken the almost sudden loss of thousands of lives."

The nature of the disease and its contagiousness encouraged forgetfulness. The swiftness of its spread and its ability to flourish then disappear before it had any real effect on the economy made it easier for people to accept, despite killing 3 percent of the nation's population.

World War I perhaps best explained the relative indifference to the pandemic. The 5 Nov 1918 issue of the *New York Times* suggested that "war had taught the people to think in terms other than individual interest and safety, and death itself had become so familiar as to lose its grimness." Such an explanation may seem quite naive, but most of those who died were young adults of the same age as those lost in combat. The obituary columns of influenza victims became one and the same blur with the war casualty list.

Influenza seemed unimportant compared with the news on the front pages of the city's newspapers. Suffragette agitation was rising as the Senate vote on the rights for women drew near, and Eugene V. Debs was on his way to jail for allegedly violating the Espionage Act. On the last day of August 1918, Babe Ruth made the headlines as he pitched a three-hitter and banged out a long double to win the American League pennant for the Boston Red Sox. It was apparently of no consequence that on the same day the first cases of flu were recognized among Navy personnel in Boston and 26 sailors died.

The interweaving of the war and pandemic seems almost to resemble a pattern of insanity. On 11 Sept 1918 Washington officials disclosed that the Spanish Influenza had arrived in the city. On the next day 13 million men, precisely the age most likely to die of the flu, lined up all over the United States and crammed into city halls, post offices, and schools to register for the draft. It was a gala flag-waving affair everywhere including Boston where 96,000 registered then sneezed and coughed on one another.

The epidemic did not kill the ranks of the famous and powerful. Perhaps if Woodrow Wilson or someone of like stature had died, the world might have remembered. It killed the daughter of General Edwards of the 26th Division of the American Expeditionary Forces, but not the general. It killed the daughter of Samuel Gompers, president of the American Federation of Labor, but left America's most powerful labor leaders alive.

On the level of organizations and institutions, the Spanish Influenza had little impact. It did spur great activity among medical scientists and their institutions, but this was the single great exception. It did not lead to great changes in government, armies, and corporations. It had little influence on the course of political and military events because it affected all sides equally.

Carla R. Morrisey, RN, BSN

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11. It can reasonably be inferred that the primary function of the first sentence (lines 1–3) is to:
- suggest that folklore is a second-rate medium for recording significant historical events.
  - emphasize the author’s surprise about the place in history of the influenza epidemic of 1918.
  - suggest that the seriousness of the 1918 epidemic has been overrated.
  - caution the reader that the account of the influenza epidemic in the rest of the passage is not altogether factual.
12. The phrase “never inspired awe” (lines 9–10), most likely means that:
- due to poor communication, specific facts about the epidemic were unavailable.
  - Americans lacked the ability to grasp the seriousness of the epidemic.
  - Americans somehow remained relatively insensitive to the gravity of the epidemic.
  - the death toll in America paled next to the number of deaths abroad.
13. The main function of the second paragraph (lines 11–18) in relation to the passage as a whole is to:
- contrast the epidemic’s effect on Americans with its effects on citizens of other countries.
  - shift the passage to a discussion of the mysterious causes of the epidemic.
  - criticize America’s indifference toward the catastrophic epidemic.
  - provide a framework for comprehending the people’s response to the epidemic.
14. Based on the passage, which of the following statements best explains the mystery of America’s “complacency” (line 14) toward the epidemic?
- In 1918, people were generally accustomed to periods of large-scale sickness and death.
  - America was spared the worst of the epidemic.
  - Compared to other epidemics, the 1918 influenza was relatively mild.
  - Few Americans were personally affected.
15. By using the phrase “technologically advanced” (line 22), the author expresses her belief that:
- America is better prepared today to battle a deadly flu epidemic than it was in 1918.
  - technology played almost no part in the lives of Americans in 1918.
  - the advent of technology has reduced the likelihood of a deadly flu epidemic today.
  - advanced technology could have mitigated the effects of the epidemic.
16. Which of the following does NOT reasonably reflect the function of the fourth paragraph (lines 27–29) in relation to the passage as a whole?
- To alert the reader that the discussion is about to shift from factual to hypothetical.
  - To summarize briefly the main point of the previous three paragraphs.
  - To concede that it is difficult to pinpoint the specific reason for America’s reaction to the 1918 epidemic.
  - To provide evidence that contradicts an important point made earlier in the passage.
17. The tone of the passage suggests that the author’s personal view of America’s attitude toward the influenza epidemic of 1918 is that of:
- admiration that the people did not panic or overreact to the crisis.
  - astonishment over America’s apathy.
  - puzzlement that the epidemic failed to evoke a more robust response.
  - disgust over Americans’ indifference toward a terrible calamity.
18. Based on the passage, which of the following best describes the spread of influenza across the United States during 1918–1919?
- It swept across the land from east to west.
  - It progressed much like the 19th century epidemics of typhoid, cholera, and other diseases.
  - The symptoms of infection came and went relatively quickly.
  - The victims of the disease were mostly children and old people.
19. According to the passage, the single greatest benefit that emerged from the 1918 influenza epidemic was:
- a flurry of medical research.
  - an increase of enlistments into the armed forces.
  - more enthusiasm for the United States to enter World War I.
  - the recognition of America’s ability to endure great hardship.
20. The primary purpose of the last two paragraphs of the passage (lines 80–94) is to make the point that the influenza epidemic:
- had no effect on celebrities or people in power.
  - took its greatest toll on ordinary people.
  - victimised people at random.
  - preyed mostly on people serving in the military.



### Passage 3—Humanities

This passage is excerpted from "The Parisian Stage," an essay written for a London newspaper late in the nineteenth century by the American author Henry James.

It is impossible to spend many weeks in Paris without observing that the theater plays a very important part in French civilization; and it is impossible to go much to the theater without finding it a copious source of instruction as to French ideas, manners, and philosophy. I supposed that I had a certain acquaintance with these complex phenomena, but during the last couple of months I have occupied a great many orchestra chairs, and in the merciless glare of the footlights I have read a great many of my old convictions with a new distinctness. I have had at the same time one of the greatest attainable pleasures; for, surely, among the pleasures that one deliberately seeks and pays for, none beguiles the heavy human consciousness so totally as a first-rate evening at the *Théâtre Français*. It was the poet Gray, I believe, who said that his idea of heaven was to lie all day on a sofa and read novels. He, poor man, spoke while *Clarissa Harlowe* was still the fashion, and a novel was synonymous with an eternity. A much better heaven, I think, would be to sit all night on a theater seat (if they were only a little better stuffed) listening to Delaunay, watching Got, or falling in love with Mademoiselle Desclée.

An acted play is a novel intensified; it realizes what the novel suggests, and, by paying a liberal tribute to the senses, anticipates your possible complaint that your entertainment is of the meager sort styled "intellectual." The stage throws into relief the best gifts of the French mind, and the *Théâtre Français* is not only the most amiable but the most characteristic of French institutions. I often think of the inevitable first sensations there of the "cultivated foreigner," let him be as stuffed with hostile prejudices as you please. He leaves the theater crying, Ah, France is the civilized nation *par excellence*. Such art, such finish, such grace, such taste, such a marvelous exhibition of applied science, are the mark of a chosen people, and these delightful talents imply the existence of every virtue. His enthusiasm may be short and make few converts; but certainly during his stay in Paris, whatever may be his mind in the intervals, he never listens to the traditional *toc-toc-toc* which sounds up the curtains in the Rue Richelieu's theaters, without murmuring, as he squares himself in his chair and grasps his opera glasses, that, after all, the French are prodigiously great!

I shall never forget a certain evening in the early summer when, after a busy, dusty, weary day in the streets, staring at charred ruins and finding in all things a vague aftertaste of gunpowder, I repaired to the *Théâtre Français* to listen to Molière's *Mariage Forcé* and Alfred de Musset's *Il ne Faut Jurer de Rien*. The entertainment seemed to my travel-tired brain what a perfumed bath is to one's weary limbs, and I sat in a sort of languid ecstasy of contemplation and wonder—wonder that the tender flower of poetry and art should bloom again so bravely over blood-stained pavements and fresh made-up graves.

Molière is played at the *Théâtre Français* as he deserves to be—one can hardly say more—with the most ungrudging breadth, exuberance and verve, and yet with a kind of academic harmony and solemnity. Molière, if he ever drops a kindly glance on Monsieur Got and Monsieur Coquelin, must be the happiest of immortals. To be read two hundred years after your death is something; but to be acted is better, at least when your name does not happen to be Shakespeare and your interpreter the great American (or, indeed, the great British) tragedian. Such powerful, natural, wholesome comedy as that of Molière certainly never was conceived, and the actors I have just named give it its utmost force. I have often wondered that, in the keen and lucid atmosphere which Molière casts about him, some of the effusions of his modern successors should live for an hour. Alfred de Musset, however, need fear no neighborhood, and his *Il ne Faut Jurer*, after Molière's tremendous farce, was like fine sherry after strong ale. Got plays in it a small part, which he makes a great one, and Delaunay, the silver-tongued, the ever-young, and that plain robust person and admirable artist, Madame Nathalie, and that divinely ingenuous ingénue, Mademoiselle Reichemberg. It would be a poor compliment to the performance to say that it might have been mistaken for real life. If real life were a tithe as charming it would be a merry world.



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21. Which of the following descriptions most accurately and completely represents this passage?
- The author's fond recollections of his experience in Paris
  - An evocative and affectionate appreciation of French theater
  - A detailed and objective critique of the *Théâtre Français*
  - An abstract and scholarly appraisal of Molière's plays
22. All of the following are clearly identified in the passage as actors EXCEPT:
- Delaunay.
  - Got.
  - de Musset.
  - Reichemberg.
23. Which of the following quotations best expresses the main point of the passage?
- "... in the merciless glare of the footlights I have read a great many of my old convictions with a new distinctness."
  - "An acted play is a novel intensified."
  - "The stage throws into relief the best gifts of the French mind."
  - "Such powerful, natural, wholesome comedy as that of Molière certainly was never conceived."
24. As it is used in line 17, the word *poor* most nearly means:
- deprived.
  - poverty-stricken.
  - ill.
  - lazy.
25. It can be most reasonably concluded from the author's allusions to conditions in Paris (lines 45–56) that:
- it was difficult for him to get around in the city.
  - the city was undergoing a construction boom.
  - the city suffered from the aftereffects of war.
  - a major fire had destroyed most of the city.
26. Given the information in the passage, one can infer all of the following about Molière EXCEPT that:
- his works serve as a model for other playwrights.
  - his plays were meant to provoke laughter.
  - as a playwright, he was not as great as Shakespeare.
  - he was a founder of the *Théâtre Français*.
27. It can be inferred from the passage that the author most highly valued which of the following about the theater?
- Intellectual stimulation
  - Escaping from the dirty, crowded streets of Paris
  - Sitting in a comfortable seat
  - Learning about French culture
28. During his evening at the theater to see a play by Molière and a play by de Musset, which of the following features of the performances does the author observe?
- The superiority of Molière's play
  - The beauty of the language
  - The realism of the performances
  - The audience's appreciation
29. By asserting that Molière "deserves" (line 58) to be played at the *Théâtre Français*, the author implies that:
- the best of French plays should be performed in the best of French theaters.
  - Molière's plays should be performed only in large halls like the *Théâtre Français*.
  - the tradition of performing Molière at the *Théâtre Français* should continue.
  - Molière expected his plays to be performed at the *Théâtre Français* after his death.
30. Which of the following best describes the reactions of a hypothetical "cultivated foreigner" (line 32) who sees a play at the *Théâtre Français* for the first time?
- France must be envied by cultured people everywhere.
  - To attend a play in Paris is extraordinarily eye-opening.
  - France epitomizes refinement in art and culture.
  - The French theater causes people to lose their prejudices.

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## Passage 4—Natural Science

*This passage, from a publication titled "The Health Effects of Caffeine," discusses the complexities of governing the use of caffeine in food and beverages.*

The use of beverages that contain caffeine has been debated for centuries. In almost every part of the world where coffee and tea have been available, religious or government leaders have tried to ban or restrict its use. All such attempts, until the present time, lacked scientific credibility.

New studies linking caffeine use to central nervous system problems and birth defects in test animals have prompted scientists and policy makers in the U.S. to reconsider caffeine's regulatory status. This is a complex task, however, because caffeine is regulated under three different sections of the Federal Food, Drug, and Cosmetic Act. It is a natural ingredient in coffee and tea, a food additive in soft drinks, and an added ingredient in over-the-counter drugs.

Foods containing any poisonous or hazardous substance are defined as adulterated and prohibited by the Food and Drug Act. However, foods which naturally contain harmful substances may be permitted if the amount of the substance does not ordinarily injure health. Thus, foods containing caffeine, like coffee and tea, are approved despite caffeine's adverse health effects at high dose levels.

As a food additive, caffeine is regulated as a "generally recognized as safe" (GRAS) substance. Because of this regulatory status, food processors are not required to prove caffeine's safety before adding it to their products. Instead, caffeine's long and widespread history of use is considered sufficient proof of safety. The Food and Drug Administration (FDA) has published rules which limit the amount of caffeine that can be added to foods.

Caffeine is also an ingredient in many over-the-counter drug preparations. The Food and Drug Act specifies that all drug ingredients must be safe and effective for their intended use. Caffeine is an effective stimulant which is why it is added to pain relievers and cold remedies. When used as directed in these medicines, caffeine is safe and presents no health hazards to the vast majority of consumers.

Recently, a committee of the Federation of American Societies for Experimental Biology reviewed all the scientific evidence on caffeine. Based on caffeine's stimulant properties, this advisory group recommended to the FDA that caffeine be removed from the so-called GRAS list of food chemicals. As a result of this and petitions from other groups, the FDA proposed new regulations for caffeine use. If these proposals are

adopted, caffeine will be removed from the GRAS list. The FDA will also amend the current rule which governs the mandatory use of caffeine in certain soft drinks.

Removing caffeine from the GRAS list would have little immediate impact on consumers. This action would require food processors to gather additional scientific evidence to prove caffeine is safe. During the time needed to conduct proper studies, caffeine would still be available for use. However, if food processors fail to provide this required information, or find additional evidence that caffeine is harmful, the FDA could take action to ban the use of caffeine as a food additive.

Current regulations state that caffeine must be an ingredient in "cola" and "pepper" flavored soft drinks. About 10 percent of the caffeine in these products is obtained naturally from cola nuts, the chief flavoring agent. The remaining 90 percent is added caffeine.

Current rules do not require added caffeine other than that naturally present in cola nuts. Added caffeine is an optional ingredient which must be listed on the product label. The caffeine derived from cola nuts does not have to be listed among the product ingredients.

Under the new FDA proposal, both natural and added caffeine would become optional ingredients in cola and pepper soft drinks. Thus, manufacturers could make an essentially caffeine-free product by decaffeinating cola nuts and avoiding added caffeine. The new proposal would also require that any caffeine, whether added or natural, be listed on the ingredient label.

These proposed regulations would not affect the use of caffeine in non-cola soft drinks or in over-the-counter drugs.

American Council on Science and Health

31. Based on information in the passage, the main function of the Food and Drug Administration is to:
- make the rules governing the use of caffeine in food products.
  - force soft-drink manufacturers to keep caffeine in colas and pepper-flavored drinks to a minimum.
  - make laws that must be followed by food manufacturers.
  - control caffeine in food products and in over-the-counter drugs.

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32. As used in line 17, the word *adulterated* means:
- F. prohibited.
  - G. unlawful.
  - H. lethal.
  - J. dangerous.
33. Despite its apparent hazards, caffeine has not been banned from food products because:
- A. it has a long and honorable history of use.
  - B. consumers can avoid caffeine by reading ingredient labels.
  - C. small quantities have never been proved harmful.
  - D. food manufacturers claim that the caffeine controversy has been exaggerated.
34. “Generally recognized as safe” (lines 24–25) is:
- F. a description of caffeine used by manufacturers of food products.
  - G. an official government designation applied to any number of food products.
  - H. a phrase called “misleading” by the Federation of American Societies for Experimental Biology.
  - J. the FDA’s stamp of approval that appears on pain relievers and cold remedies containing caffeine.
35. According to the passage, which of the following is most likely to occur if caffeine is taken off the GRAS list?
- A. All soft drinks will be caffeine-free.
  - B. Manufacturers will stop adding caffeine to food products.
  - C. All food products containing caffeine will be labeled with a warning to consumers.
  - D. Manufacturers of food products will be required to prove that caffeine is harmless.
36. Based on the passage, when changes are planned in federal food and drug laws, the government must consider the interests of all of the following groups EXCEPT:
- F. pharmacists who dispense over-the-counter drugs.
  - G. manufacturers of food products.
  - H. consumer groups.
  - J. scientists and other researchers.
37. Soft drink manufacturers prefer to use the natural caffeine found in cola nuts in their products because:
- A. caffeine makes drinks more flavorful.
  - B. consumers enjoy the lift they get from caffeine.
  - C. caffeine helps to keep the drink from spoiling.
  - D. it is one of the least expensive food additives.
38. According to the passage, past attempts to ban drinks containing caffeine have failed because:
- F. people refused to change their habits.
  - G. the tea, coffee, and soft drink industries were too strong.
  - H. opponents of caffeine lacked scientific data to back up their objections.
  - J. lawmakers could not agree on how to enforce anti-caffeine regulations.
39. Which of the following properties of caffeine is not indicated by information in the passage?
- A. It is addictive.
  - B. It has been shown to be hazardous to laboratory animals.
  - C. It is found in nature.
  - D. It makes sick people feel better.
40. The author of the passage seems primarily concerned with:
- F. procedures for amending the Federal Food, Drug, and Cosmetic Act.
  - G. the future of caffeine in foods.
  - H. warning readers about the hazards of caffeine.
  - J. the need for more scientific investigation of the effects of caffeine.



If there is still time remaining, you may review your answers.



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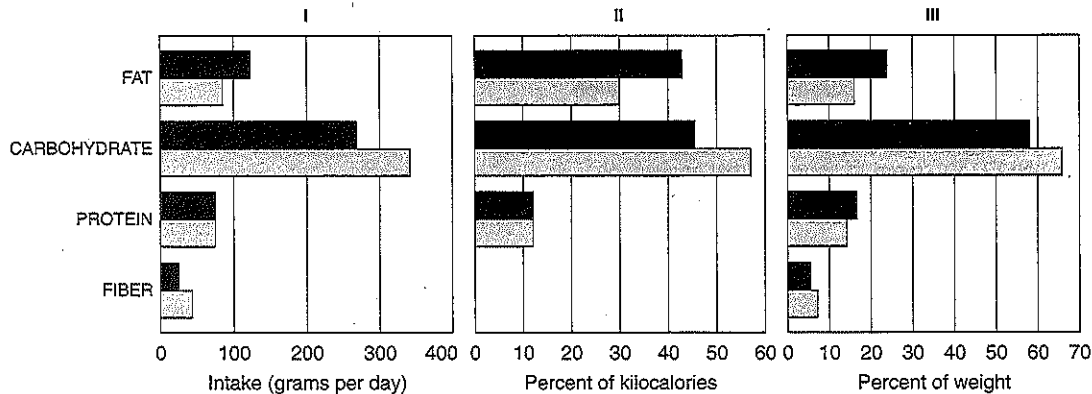
## SCIENCE REASONING TEST

35 MINUTES—40 QUESTIONS

**Directions:** This test consists of several distinct passages. Each passage is followed by a number of multiple-choice questions based on the passage. Study the passage, and then select the best answer to each question. You are allowed to reread the passage. Record your answer by blackening the appropriate space on the answer sheet.

## Passage 1

The charts below show the composition of the average American diet as it exists (dark bar) and as recommended by the National Research Council (light bar) in 1987. (These recommendations have since been challenged, but their validity has not been decisively disproved.) Chart I gives the total intake in grams per day of each nutrient class. Chart II gives the energy distribution among the nutrients, the fraction of total kilocalories in each nutrient. Chart III gives the fraction of each nutrient by weight.



- If the recommendations of the National Research Council were followed, people would eat:
  - more protein and less fiber.
  - more protein and less fat.
  - more carbohydrate and less fat.
  - more fiber and less protein.
- Comparison of the charts shows that:
  - most of our food energy comes from proteins.
  - we now get much more of our energy from carbohydrates than from fats.
  - we cannot increase our energy intake by eating more fiber.
  - the quantities of fats and carbohydrates in our present diet are approximately equal.
- According to these recommendations, what comment can be made about the present American diet?
  - It is overloaded with carbohydrates.
  - It has too much fiber.
  - It does not have enough fat.
  - It contains the proper amounts of proteins.
- If the recommendations for a changed diet were followed, our diet would have about:
  - four times as much carbohydrate as fat.
  - two and a half times as much carbohydrate as fat.
  - equal amounts of carbohydrate and fat.
  - nearly twice as much carbohydrate as fat.
- Comparison of the percent by weight of the different nutrients in the diet and the percent of energy each supplies shows that:
  - 1 gram of fat supplies more energy than 1 gram of carbohydrate.
  - 1 gram of carbohydrate supplies more energy than 1 gram of protein.
  - 1 gram of protein supplies about three times as much energy as 1 gram of fiber.
  - 1 gram of carbohydrate supplies more energy than 1 gram of fat.

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**Passage 2**

A bacteriologist is investigating the use of glucose by a type of bacterium as a source of energy in spore formation.

*Experiment 1*

The bacteria are grown in a nutrient solution containing a supply of glucose. When the glucose has been largely depleted, the contents of each cell shrink away from the cell wall and form a spore, which is highly resistant to environmental damage of all kinds.

*Experiment 2*

A culture of the bacteria is grown in a medium containing little glucose. The bacteria use the glucose as they grow, but do not form spores when the glucose has been depleted.

*Experiment 3*

A culture is grown in a medium containing ample glucose, but the cells are removed while there is still plenty of glucose in the medium. They are placed in distilled water, and form spores in about 13 hours.

*Experiment 4*

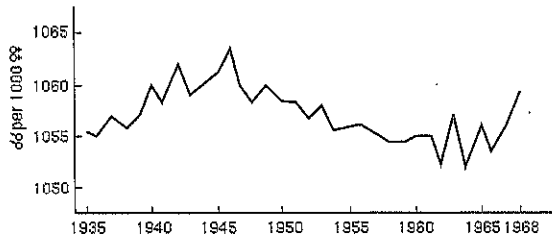
As in Experiment 3, cells are transferred from a glucose-rich medium to distilled water. If glucose is added to the water 5 hours later, the cells never form spores. If glucose is added 10 hours after the transfer, spores form 3 hours later.

6. Comparison of Experiments 1 and 2 shows that:
- F. glucose is necessary for the bacteria to grow.
  - G. the process of spore formation needs a good supply of glucose.
  - H. bacteria can protect themselves against unfavorable conditions by forming spores.
  - J. spore formation is inhibited by large concentrations of glucose.
7. A reasonable hypothesis from Experiment 3 is that:
- A. distilled water promotes the formation of spores.
  - B. distilled water retards the formation of spores, but does not prevent it.
  - C. bacterial cells store enough glucose to form spores.
  - D. bacterial cells are able to form spores without any source of glucose.
8. Experiment 1 indicates that spore formation is stimulated by deprivation of glucose. Considering the results of Experiment 4, how long must this deprivation continue?
- F. Less than 5 hours
  - G. Somewhere between 5 and 10 hours
  - H. More than 10 hours
  - J. At least 13 hours
9. The results of Experiments 3 and 4 show that withholding glucose for 10 hours:
- A. causes spores to form 3 hours later.
  - B. delays the formation of spores for 3 hours.
  - C. speeds up the formation of spores by 5 hours.
  - D. has no effect at all on the formation of spores.
10. Which of the following experiments would NOT be useful in efforts to learn more about the way bacteria use sugars in spore formation?
- F. Repeat Experiment 4 adding glucose to the water at various times after transferring the bacteria to distilled water.
  - G. Repeat Experiments 3 and 4 using bread molds instead of bacteria as the spore-forming organism.
  - H. Repeat Experiments 1 and 2 using other kinds of sugar than glucose as energy sources.
  - J. Repeat Experiment 2 using different concentrations of glucose.
11. According to these experiments, what condition must be met in order for this type of bacterium to form spores?
- A. A good supply of glucose in the medium, followed by a period in which there is little glucose
  - B. A steady supply of glucose in high concentration
  - C. A prolonged period of glucose deprivation
  - D. A sudden increase in the concentration of glucose in the medium

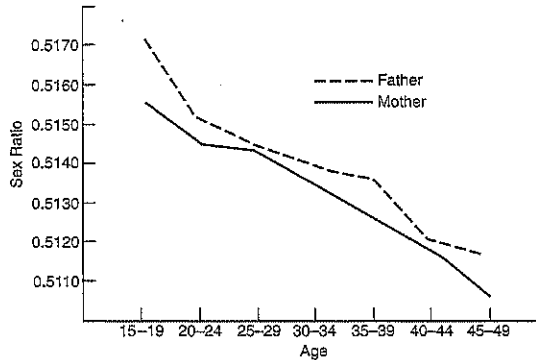
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## Passage 3

The graph below represents the number of boys born per thousand girls in the United States for a period of years (♂ = males; ♀ = females).



The following graph represents the sex ratio at birth as a function of the ages of the parents. (Sex ratio is the fraction of all newborn babies that are male.)



12. The sex ratio in 1946 was:

- F. 1063/2063
- G. 1063/2000
- H. 1063/2
- J. 1063/1052

13. Which general statement is true?

- A. There has been a steady decline in the proportion of male births.
- B. At all times, more boys than girls are born.
- C. The total number of male births decreases with the age of the parents.
- D. Younger parents have more children than older ones.

14. A couple in their early twenties decide that they would like to have a girl. Would it be a good idea for them to wait five years?

- F. No. The probability of having a boy goes up substantially in those years.
- G. Yes. The probability of having a girl goes up substantially during those years.
- H. No. The increased probability of having a girl is too small to make much difference.
- J. Yes. The probability of having a boy goes down substantially during those years.

15. The sex ratio increased during the war years 1940 to 1946, and started to rise again during the Vietnam War in 1967. This increase has been noticed during war years in other countries and during other wars. A possible explanation is that:

- A. many men are killed in wars, so the number of male babies increases to compensate.
- B. as younger men die in the war, more babies are fathered by older men.
- C. prolonged periods of sexual abstinence favor the production of the kinds of sperm that produce male babies.
- D. this may be merely a statistical accident with no real significance.

16. Is it the age of the mother or of the father that is most significant in determining the sex ratio?

- F. The father, since the line for the father lies always above the line for the mother.
- G. The mother, since the line for the mother lies always below that for the father.
- H. They affect the result equally, since both follow the same pattern of decrease with age.
- J. It is impossible to tell from the graphs because people generally tend to marry spouses of about their own age.

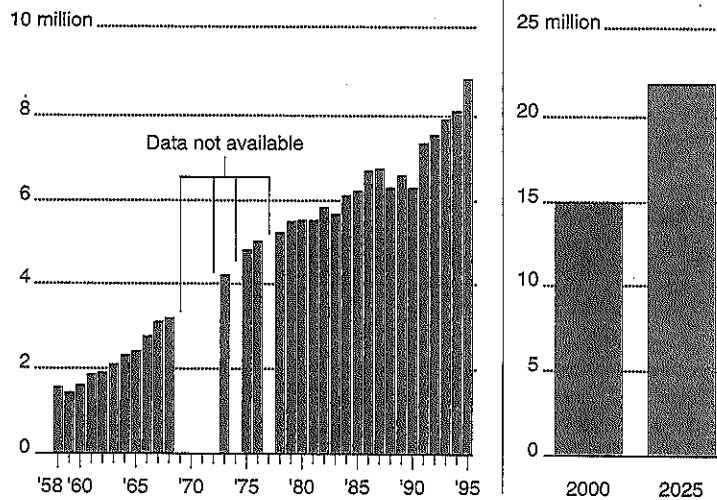
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**Passage 4**

The chart below gives the number of diagnosed cases of diabetes in the United States from the years 1958 to 1995, and projections for total cases in 2000 and 2025.

**The Diabetes Explosion**

Diabetes has skyrocketed in the United States. Below, diagnosed cases over four decades.



17. Between 1960 and 1980, the number of diagnosed cases of diabetes in the United States increased by:
  - A. 1 million.
  - B. 2 million.
  - C. 4 million.
  - D. 6 million.
18. The biggest annual increase in the number of diagnosed cases occurred in:
  - F. 1994.
  - G. 1991.
  - H. 1986.
  - J. 1973.
19. The data projected that the number of undiagnosed cases in the year 2000 would be about:
  - A. 15 million.
  - B. 13 million.
  - C. 10 million.
  - D. 5 million.
20. An important possible source of error in any conclusion reached from the graphs is that:
  - F. data from several years are unavailable.
  - G. methods of diagnosis may have improved over the years.
  - H. some years show very little increase, while in others, the increase is large.
  - J. there is no clue as to the reason for the increase.
21. One assumption made in preparing this chart is that:
  - A. there is some increasing factor in the American lifestyle that promotes the development of diabetes.
  - B. the trend to increase the incidence of diabetes in the American population will continue for some years.
  - C. the health of Americans is increasingly at risk from diabetes.
  - D. undiagnosed cases of diabetes are on the increase.

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## Passage 5

The ideal gas law is a rule for determining approximately the relationship between volume, pressure, and temperature of a gas. Experiments were done to determine how closely real gases obey this law. These are the gases that were tested, with their respective molecular weights:

Gas	Formula	Molecular weight
helium	He	4
nitrogen	N <sub>2</sub>	28
carbon dioxide	CO <sub>2</sub>	44
xenon	Xe	54
sulfur dioxide	SO <sub>2</sub>	64

## Experiment 1

A 1-liter steel cylinder is equipped with a pressure gauge and a thermometer. The cylinder is filled with various gases, in turn, at a temperature of 200 K (-73.2°C). The gases are heated and the pressure is measured at various temperatures. The chart below shows the pressure as calculated from the ideal gas law, and the actual pressures measured at various temperatures.

Temperature (kelvins)	Pressure (atmospheres)					
	Ideal	He	N <sub>2</sub>	CO <sub>2</sub>	Xe	SO <sub>2</sub>
200	1.00	1.00	1.00	1.00	1.00	1.00
500	2.50	2.50	2.51	2.52	2.52	2.54
800	4.00	4.00	4.02	4.04	4.05	4.08
1100	5.50	5.50	5.53	5.56	5.57	5.62
1400	7.00	7.00	7.03	7.07	7.09	7.16
1700	8.50	8.50	8.54	8.59	8.62	8.70
2000	10.00	10.00	10.05	10.11	10.14	10.24

## Experiment 2

The same gases are inserted, in turn, into a 1-liter cylinder fitted with a piston that can be pushed in to decrease the volume of the gas, thus increasing the pressure. The cylinder is kept in a water bath that keeps the temperature constant. The pressure is measured at various volumes. As before, the value calculated from the ideal gas law is also listed in the table.

Volume (cm <sup>3</sup> )	Pressure (atmospheres)					
	Ideal	He	N <sub>2</sub>	CO <sub>2</sub>	Xe	SO <sub>2</sub>
1000	1.00	1.00	1.00	1.00	1.00	1.00
500	2.00	2.00	2.12	1.98	1.97	1.96
250	4.00	4.02	4.25	3.93	3.85	3.82
100	10.00	10.12	12.32	9.01	8.86	8.55
50	20.00	20.52	25.84	15.87	15.28	13.87

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22. If a quantity of gas is heated at constant volume, what might result from using the ideal gas law to predict the pressure?
- F. An incorrect and useless prediction.
  - G. A small overestimation.
  - H. A small underestimation.
  - J. A minor and unpredictable error.
23. Of the gases measured, which behaves LEAST like an ideal gas?
- A. Helium, always
  - B. Nitrogen, always
  - C. Sulfur dioxide always
  - D. It depends on the nature of the experiment
24. What is the most probable explanation of the fact that no deviation from the ideal gas pressure was found when the volume of helium was reduced from  $1000 \text{ cm}^3$  to  $500 \text{ cm}^3$ ?
- F. Helium maintains its pressure until its volume is reduced more substantially.
  - G. There was an unpredicted drop in the temperature during the experiment.
  - H. Measurements were made only to the nearest hundredth of an atmosphere.
  - J. Helium is an ideal gas at moderate pressures.
25. As the volume is decreased at constant temperature, what would result from using the ideal gas law to predict the pressure?
- A. Constant minor overestimation.
  - B. Either overestimation or underestimation depending on the gas being studied.
  - C. Constant underestimation.
  - D. Unpredictably, either overestimation or underestimation.
26. Why does the first row of the data for both experiments show a value of 1.00 atmosphere regardless of which gas was used?
- F. Every experiment was started arbitrarily at ordinary atmospheric pressure.
  - G. At low pressure, all gases obey the ideal gas law.
  - H. Deviations from the ideal gas law are very small at low pressure, and were not detected.
  - J. This is pure coincidence; that value might be different if other gases were tried.
27. Which of the following hypotheses is suggested by the data?
- A. The ideal gas law gives the most accurate predictions at high temperatures and pressures.
  - B. The ideal gas law always gives a good approximation of pressure.
  - C. As a gas is compressed at constant temperature, its pressure is inversely proportional to its volume.
  - D. At constant volume, gases with the smallest molecules obey the ideal gas law most closely.



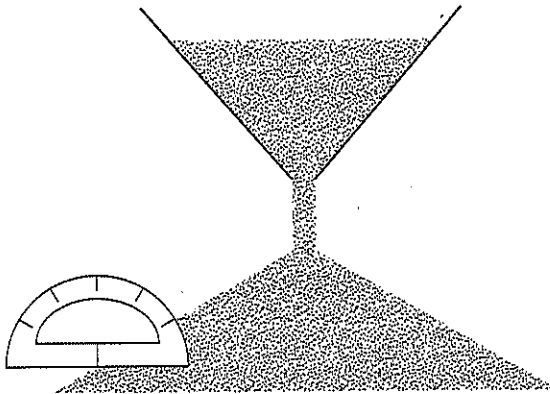
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**Passage 6**

If the highest possible pile is made of a quantity of loose material, the sides of the pile form an angle with the horizontal called the *angle of repose*. This is the largest angle at which the material can remain without having some of it slide down.

The angles of repose of various materials were measured with the apparatus shown in the sketch below. The material, such as sand, is placed in a hopper and then allowed to flow through an opening until it piles up below. The angle of the side of the pile is then measured.

*Experiment 1*

Smooth, dry, quartz sand, of water-abraded, rounded grains, is sieved and sorted according to size. Each size, separately, is fed into the hopper, and the angle of repose is measured for each.

Grain size (mm)	Angle of repose (degrees)
0.1	18
0.5	20
1.0	23
1.5	25
2.0	28
2.5	30

*Experiment 2*

Crushed marble, made of dry, sharp-angled fragments of many sizes, is sieved and sorted by size. Each size is then fed separately into the hopper.

Grain size (mm)	Angle of repose (degrees)
1.0	28
1.5	30
2.0	33
2.5	35
3.0	36
3.5	37
4.0	37

*Experiment 3*

Using the same method, the angles of repose of various other kinds of materials are measured:

Substance	Angle of repose
Crushed marble, unsorted, mixed 1.0–4.0 mm	37
Crushed marble, 3.0 mm, mixed 3 parts to 1 part water	12
Water-abraded sand, 3.0 mm, mixed 3 parts to 1 part water	12
Garden soil, dry	27
Garden soil, slightly moist	46
Garden soil, saturated with water	14



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28. The angle of repose depends on:
- F. the size of the particles only.
  - G. the particle shape and water content of the material only.
  - H. the particle size and shape and the water content of the material.
  - J. the particle size and water content of the material only.
29. The experimenter compares the results of Experiments 1 and 2, and concludes that the angle of repose is larger for sharp-angled than for rounded particles. This conclusion might be challenged because:
- A. there was no control of the chemical composition of the material.
  - B. no experiments were done with rounded particles larger than 2.5 mm.
  - C. no experiments were done with angled particles smaller than 1.0 mm.
  - D. all angles of repose were measured as accurate to only the nearest whole degree.
30. What is a reasonable hypothesis based on the trials in Experiments 2 and 3?
- F. Wet sand will pile up in taller piles than an equal quantity of dry sand.
  - G. As a pile of water-saturated garden soil dries out, it will slump to form a lower, wider pile.
  - H. Natural abrasion of sand, mixed with water, causes its angle of repose to decrease.
  - J. In a dry sample of mixed sizes, the angle of repose depends on the size of the largest fragments in the mixture.
31. In hilly or mountainous regions, landslides occur during the rainy season. According to the results of these experiments, why is this so?
- A. Water flowing downhill carries soil along with it.
  - B. When materials are mixed with water, the angle of repose becomes smaller.
  - C. Water abrades the soil particles and makes them smooth and round.
  - D. The slope of the hillsides is less than the angle of repose in the dry season.
32. The results of Experiment 2 suggest a limit to the value of the angle of repose of that material. What additional kind of material might be used to test this hypothesis?
- F. Crushed feldspar, sorted at 3.0 mm
  - G. Marble particles 3.0 mm wide, abraded to produce rounding
  - H. Sharp-angled marble fragments 5.0 mm wide
  - J. Rounded marble particles 3.0 mm wide
33. A company in the business of supplying building and paving materials keeps various kinds of sand and gravel piled up in storage. For equal amounts of material, which of the following materials would use the largest amount of land space?
- A. Beach sand, consisting of rounded grains
  - B. Builders' sand, consisting of sharp-angled grains
  - C. Crushed stone, consisting of sharp-angled particles
  - D. River gravel, consisting of well-rounded particles

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**Passage 7**

It has been found that a chemical called acrylamide is found in many foods and that it is produced when starch is heated to high temperatures, as in baking or especially in frying foods. Two scientists differ as to the appropriate course of action for dealing with this.

*Scientist 1*

Acrylamide is known to produce cancer in dogs, and is suspected of doing the same in humans. The chemical is widespread in water, and the U.S. Environmental Protection agency has set a standard of tolerance of 0.12 micrograms in a glass of drinking water.

While there is no acrylamide in a boiled potato, a serving of french fries can have over 80 micrograms of it. Breakfast cereals are prepared at high temperatures, and have substantial amounts of acrylamide. Even a slice of bread, baked in the normal way, has more acrylamide than the flour that went into it. Frying uses higher temperatures than baking, and accordingly fried foods have the highest levels.

The danger posed by acrylamide has been brought to the courts. In California, some fast-food outlets are being sued for violation of the state law that requires manufacturers to warn consumers of toxic chemicals in their food. Plaintiffs will argue that most chemical carcinogenics in dogs also promote the formation of cancer in humans. This would put acrylamide into the dangerous chemical category.

Tests are underway to determine what levels of acrylamide pose a serious threat to people, but it is extremely difficult to get reliable data. While these studies are being made it is prudent to eat less fried food, and particularly to eat no foods that are deep fried or burned. Meanwhile, research chemists are studying the production of acrylamide in food, perhaps leading to a method of preventing its formation in the cooking of our favorite foods.

*Scientist 2*

Acrylamide is a systemic poison, but the lethal dose is thousands of times higher than any that might be gotten in our food. True, it produces cancer in dogs when fed to them in extraordinarily high doses, but it has not been linked to cancer in humans.

Eating is never completely risk-free. Acrylamide is one of many substances in our food that may be detrimental to our health. We are constantly exposed to many kinds of chemicals in our food. Most are natural substances, intrinsic parts of the metabolism of the animals and plants that make up our diet. Plants of the nightshade family, including potatoes, tomatoes, and eggplant, contain solanine, the same deadly poison as in nightshade and loco weed. Other substances have been added to our food by our agricultural and processing practices. Just about any of them could be poisonous, and many carcinogenic, if the dose is high enough.

The crucial question about any of these substances is whether the concentration is high enough to cause concern. In the case of acrylamide, there is no real information about the dosage level in food that might be dangerous. There is really no reason to single it out for special attention; it is just one of a multitude of trace chemicals in our food whose danger level is unknown. The best advice is to eat a balanced, varied diet, with no special concentration on any one food. French fries, in moderation, can be included.

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34. Both scientists agree that:
- F. our foods contain many dangerous substances.
  - G. many of our foods contain acrylamide.
  - H. the standard of the Environmental Protection Agency is too low.
  - J. there is too much acrylamide in our food.
35. The chief point of disagreement between the two scientists is whether:
- A. acrylamide is naturally present in the food or is introduced artificially.
  - B. acrylamide has been shown to cause cancer in dogs.
  - C. acrylamide is present in larger amounts in fried foods.
  - D. we should modify our diets to take account of the presence of acrylamide in the food.
36. Scientist 1 might respond to Scientist 2 by saying:
- F. the levels of acrylamide in fried foods are very high.
  - G. while the evidence is not in, it is a good idea to err on the side of caution.
  - H. since acrylamide is a known carcinogen, it should be kept out of all food we eat.
  - J. the amount of acrylamide in our food is too small to present a danger.
37. What additional information would be needed to resolve the differences between the two scientists?
- A. What level of acrylamide in the food constitutes a danger of causing cancer?
  - B. What foods contain large amounts of acrylamide?
  - C. What other chemicals found in food are carcinogenic?
  - D. How much fried food does the average person eat?
38. Scientist 2 points out that tomatoes and potatoes:
- F. naturally contain acrylamide in small quantities.
  - G. should be labeled with a warning of their poison content.
  - H. are examples of foods containing negligible amounts of poison.
  - J. like fried foods, should be eaten in small quantities only.
39. If called as an expert witness in a hearing to determine whether foods should be labeled with acrylamide content, what would Scientist 2 be most likely to say?
- A. The levels of acrylamide in food are too low to constitute a danger.
  - B. In the present state of our knowledge, there is no more reason to label acrylamide content than many other chemicals.
  - C. To be conservative about the issue, foods should be labeled with acrylamide content.
  - D. The issue cannot be decided until more information is available.
40. When this disagreement becomes public knowledge, an important outcome might be:
- F. a ban on the sale of fried foods.
  - G. reexamination of the laws requiring labeling of foods containing hazardous substances.
  - H. public disgrace of one or the other of the scientists.
  - J. a law requiring that foods containing acrylamide be labeled as such.



If there is still time remaining, you may review your answers.