

Chapter 19 Middle Level ISEE Practice Test

# **Middle Level Practice Test**

### Be sure each mark *completely* fills the answer space.

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

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

		SECTION 3		
1 (A) (B) (C) (D)	9 (A) (B) (C) (D)	17 (A) (B) (C) (D)	25 (A) (B) (C) (D)	33 (A) (B) (C) (D)
2 A B C D	10 (A) (B) (C) (D)	18 (A) (B) (C) (D)	26 (A) (B) (C) (D)	34 (A) (B) (C) (D)
3 A B C D	11 (A) (B) (C) (D)	19 (A) (B) (C) (D)	27 (A) (B) (C) (D)	35 (A) (B) (C) (D)
4 (A) (B) (C) (D)	12 (A) (B) (C) (D)	20 (A) (B) (C) (D)	28 (A) (B) (C) (D)	36 (A) (B) (C) (D)
5 A B C D	13 (A) (B) (C) (D)	21 (A) (B) (C) (D)	29 (A) (B) (C) (D)	
6 A B C D	14 (A) (B) (C) (D)	22 (A) (B) (C) (D)	30 (A) (B) (C) (D)	
7 (A) (B) (C) (D)	15 (A) (B) (C) (D)	23 (A) (B) (C) (D)	31 (A) (B) (C) (D)	
8 A B C D	16 (A) (B) (C) (D)	24 (A) (B) (C) (D)	32 (A) (B) (C) (D)	

		SECTION 4		
1 (A) (B) (C) (D)	11 (A) (B) (C) (D)	21 (A) (B) (C) (D)	31 (A) (B) (C) (D)	41 (A) (B) (C) (D)
2 (A) (B) (C) (D)	12 (A) (B) (C) (D)	22 (A) (B) (C) (D)	32 (A) (B) (C) (D)	42 (A) (B) (C) (D)
3 (A) (B) (C) (D)	13 (A) (B) (C) (D)	23 (A) (B) (C) (D)	33 (A) (B) (C) (D)	43 (A) (B) (C) (D)
4 (A) (B) (C) (D)	14 (A) (B) (C) (D)	24 (A) (B) (C) (D)	34 (A) (B) (C) (D)	44 (A) (B) (C) (D)
5 (A) (B) (C) (D)	15 (A) (B) (C) (D)	25 (A) (B) (C) (D)	35 (A) (B) (C) (D)	45 (A) (B) (C) (D)
6 (A) (B) (C) (D)	16 (A) (B) (C) (D)	26 (A) (B) (C) (D)	36 (A) (B) (C) (D)	46 (A) (B) (C) (D)
7 (A) (B) (C) (D)	17 (A) (B) (C) (D)	27 (A) (B) (C) (D)	37 (A) (B) (C) (D)	47 (A) (B) (C) (D)
8 (A) (B) (C) (D)	18 (A) (B) (C) (D)	28 (A) (B) (C) (D)	38 (A) (B) (C) (D)	
9 (A) (B) (C) (D)	19 (A) (B) (C) (D)	29 (A) (B) (C) (D)	39 (A) (B) (C) (D)	
10 (A) (B) (C) (D)	20 (A) (B) (C) (D)	30 (A) (B) (C) (D)	40 (A) (B) (C) (D)	

# Section 1 **Verbal Reasoning**

#### **40 Questions**

Time: 20 Minutes

This section is divided into two parts that contain two different types of questions. As soon as you have completed Part One, answer the questions in Part Two. You may write in your test booklet. For each answer you select, fill in the corresponding circle on your answer document.

### Part One - Synonyms

Each question in Part One consists of a word in capital letters followed by four answer choices. Select the one word that is most nearly the same in meaning as the word in capital letters.

### SAMPLE QUESTION: Sample Answer TRUTH: (A) dread (B) marriage (C) reality (D) relevance

**VR** 



## **Part Two – Sentence Completion**

Each question in Part Two is made up of a sentence with one blank. Each blank indicates that a word is missing. The sentence is followed by four answer choices. Select the word that best completes the meaning of the sentence as a whole.

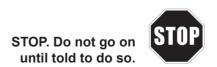
# SAMPLE QUESTIONS:

The question was so ----- that the best student in class got it wrong.

- (A) coarse
- (B) difficult
- (C) funny
- (D) long

### Sample Answer

 $A \bigcirc C \bigcirc$ 



# Part One - Synonyms

**Directions:** Select the word that is most nearly the same in meaning as the word in capital letters.

#### 1. UNUSUAL:

- (A) friendly
- (B) happy
- (C) new
- (D) peculiar

#### 2. ASSISTANCE:

- (A) call
- (B) disability
- (C) service
- (D) teaching

#### 3. REALITY:

- (A) dream
- (B) fact
- rarity (C)
- (D) security

#### 4. DIMINUTION:

- (A) assessment
- (B) leniency
- (C) reduction
- (D) restitution

#### 5. CONTENTED:

- diplomatic (A)
- (B) disgusted
- mammoth (C)
- (D) satisfied

#### 6. BOUND:

- (A) badgered
- confused (B)
- (C) obliged
- (D) relieved

#### 7. FALTER:

- (A) drop
- (B) hesitate
- (C) question
- (D) replenish

#### 8. CONTAINED:

- (A) eliminated
- (B) held
- (C) raging
- (D) wooden

#### 9. REVERE:

- (A) disdain
- (B) esteem
- (C) faith
- (D) reliance

#### 10. DILIGENT:

- (A) defensive
- (B) hardworking
- (C) lazy
- (D) obsessive



#### 11. DETRIMENTAL:

- (A) harmful
- knowledgeable (B)
- (C) tentative
- (D) worrisome

#### 12. VOW:

- (A) argue
- (B) claim
- (C) please
- (D) pledge

#### 13. ASPIRATION:

- (A) focus
- (B) hope
- (C) injury
- trend (D)

#### 14. BASHFUL:

- (A) argumentative
- serious (B)
- (C) shy
- (D) tolerant

#### 15. SINISTER:

- (A) elderly
- (B) erratic
- uncomfortable (C)
- wicked (D)

#### 16. DISCLOSE:

- (A) hide
- (B) remove
- (C) reveal
- (D) undress

#### 17. CONGEAL:

- (A) coagulate
- (B) help
- (C) recede
- (D) weaken

#### 18. INUNDATE:

- (A) enter
- (B) flood
- (C) migrate
- (D) strive

#### 19. STEADFAST:

- (A) constant
- (B) optional
- (C) quick
- (D) restful

#### 20. RUTHLESS:

- (A) counterfeit
- (B) unofficial
- (C) unsparing
- (D) victorious

# Part Two - Sentence Completion

**Directions:** Select the word that best completes the sentence.

- 21. Myron was able to remain completely -----; he never took sides in any of the disagreements around the house.
  - (A) biased
  - (B) interested
  - (C) neutral
  - (D) thoughtful
- 22. Since the great drought left the soil completely useless, the people of that country were forced to ----- food from other countries.
  - (A) export
  - (B) import
  - (C) report on
  - (D) sell
- 23. Because he was annoyed by even the smallest grammatical error, Mr. Jones reviewed all the students' papers ------before grading them.
  - (A) crudely
  - (B) helplessly
  - (C) inefficiently
  - (D) meticulously
- 24. Eric doesn't merely dislike racism; he ----- it.
  - (A) abhors
  - (B) moderates
  - (C) questions
  - (D) studies

- 25. Sharon's anger was too great: David simply could not ----- her with his charm.
  - (A) irritate
  - (B) manipulate
  - (C) pacify
  - (D) terrify
- 26. Even though the accident led to serious damage to our property, our ------ lawyer didn't present a convincing argument and we received no compensation.
  - (A) discerning
  - (B) fatalistic
  - (C) incompetent
  - (D) professional
- 27. After months of petty disputes, the two countries finally decided to sit down at a table and have a ------ discussion.
  - (A) friendly
  - (B) hostile
  - (C) lengthy
  - (D) pressing
- 28. Although the thief claimed that he accidentally picked up the stolen watch, the jury judged his action -----.
  - (A) deliberate
  - (B) frantic
  - (C) impractical
  - (D) misguided



- 29. In order to be a good doctor, you don't need to be ----- yourself, just as a good architect does not have to live in a fancy house.
  - (A) educated
  - (B) handsome
  - (C) healthy
  - (D) thoughtful
- 30. Pete ----- his coach when he followed up his winning season with an even better performance this year.
  - (A) disappointed
  - gratified (B)
  - relieved (C)
  - (D) upset
- 31. While many species, such as wolves, travel in groups, the cheetah is a -----animal.
  - (A) dangerous
  - (B) pack
  - (C) solitary
  - (D) territorial
- 32. During his years in the Senate, Jones felt ----- about speaking up at all, while most of the other senators were aggressive and argumentative.
  - (A) blithe
  - (B) contented
  - favorable (C)
  - (D) timid

- 33. The politician's speech was so ----- that nearly everyone in the room decided not to vote for him.
  - (A) feeble
  - (B) monotonous
  - (C) persuasive
  - (D) unique
- The corporation did not have a ----- system for promotions; each department was free to use its own discretion in advancing employees.
  - (A) dignified
  - (B) favorable
  - (C) forgiving
  - uniform (D)
- 35. Only from years of training can a gymnast hope to become ----- enough to master Olympic-level techniques.
  - (A) agile
  - (B) mature
  - passive (C)
  - strict (D)
- 36. Though Mr. Fenster was known to be ----- toward his neighbors, he always welcomed their children as trick-ortreaters at Halloween.
  - belligerent (A)
  - (B) cheerful
  - (C) courteous
  - (D) direct



- 37. The ----- young man talked back to his parents and teachers alike.
  - dreary (A)
  - (B) insolent
  - (C) nervous
  - (D) respectful
- 38. While the painting's brushstrokes seem ----, they are actually carefully planned out.
  - (A) flagrant
  - (B) haphazard
  - intricate (C)
  - (D) paltry

- 39. The Declaration of Independence is premised upon ----- principles, such as protecting life, liberty, and the pursuit of happiness.
  - (A) united
  - (B) lofty
  - (C) predictable
  - variable (D)
- 40. Our teacher advised us not to get too caught up in the ----- of information in the textbook, or we could lose the "big picture" of its theory.
  - (A) minutiae
  - (B) principles
  - (C) scope
  - (D) thought

# Section 2 **Quantitative Reasoning**

37 Questions

Time: 35 Minutes

This section is divided into two parts that contain two different types of questions. As soon as you have completed Part One, answer the questions in Part Two. You may write in your test booklet. For each answer you select, remember to fill in the corresponding circle on your answer document.

Any figures that accompany the questions in this section may be assumed to be drawn as accurately as possible EXCEPT when it is stated that a particular figure is not drawn to scale. Letters such as x, y, and n stand for real numbers.

#### Part One - Word Problems

Each question in Part One consists of a word problem followed by four answer choices. You may write in your test booklet; however, you may be able to solve many of these problems in your head. Next, look at the four answer choices given and select the best answer.

#### **EXAMPLE 1:**

Sample Answer

 $\bigcirc$  B C D

What is the value of the expression

 $1 + 3 \times (4 \div 2) - 5$ ?

- (A) 2
- (B) 3
- (C) 4
- (D) 8

The correct answer is 2, so circle A is darkened.

## Part Two - Quantitative Comparisons

All questions in Part Two are quantitative comparisons between the quantities shown in Column A and Column B. Using the information given in each question, compare the quantity in Column A to the quantity in Column B, and chose one of these four answer choices:

- (A) The quantity in Column A is greater.
- The quantity in Column B is greater. (B)
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

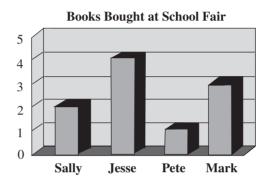
EXAMPLE 2:	$\frac{\text{Column A}}{\frac{2}{3} \text{ of 9}}$	$\frac{\text{Column B}}{\frac{1}{3}} \text{ of } 18$	Sample Answer  (A ® ● ①
	The quantity in <u>Column A</u> quantity in <u>Column B</u> (6),		
EXAMPLE 3:	When integer $x$ is more result is greater than $\frac{\text{Column A}}{x}$	1 v	Sample Answer  (A) (B) (C) (C)
	Since $10 < 2x < 16$ , $5 < x < 6$ or 7, there is not enough determine the relationship	information given to	I

## Part One - Word Problems

**Directions:** Choose the best answer from the four choices given.

- 1.  $54 \times 3 =$ 
  - (A) 123
  - (B) 150
  - (C) 162
  - (D) 172
- 2. What is the area of a square with a side of length 2?
  - (A) 2
  - (B) 4
  - (C) 6
  - (D) 8
- 3.  $3 \times 2 \times 1 (4 \times 3 \times 2) =$ 
  - (A) 18
  - (B) 6
  - (C) -6
  - (D) -18
- 4. Vicky scored 80, 90, and 94 on her three tests. What was her average score?
  - (A) 81
  - (B) 88
  - (C) 90
  - (D) 93

Questions 5–6 refer to the following graph.



- 5. Who bought the most books at the school fair?
  - (A) Sally
  - Jesse (B)
  - (C) Pete
  - Mark (D)
- 6. Sally and Mark together bought how many more books than Jesse?
  - (A) 1
  - (B) 2
  - 3 (C)
  - (D) 5

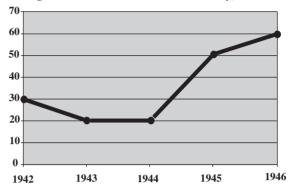
- 7.  $\frac{1}{2} + \frac{3}{4} =$ 
  - (A)  $\frac{3}{8}$
  - (B)
  - (C)
  - (D)
- 8. What is the value of the digit 7 in the number 4,678.02?
  - 7 (A)
  - 70 (B)
  - (C) 700
  - (D) 7,000
- 9. Jason has several books in his room, 20% of which are fiction. The other books are nonfiction. If he has 5 fiction books, how many nonfiction books does he have?
  - (A) 5
  - 10 (B)
  - (C) 20
  - (D) 25
- 10.  $\frac{7}{0.35}$  =
  - (A) 0.2
  - 2 (B)
  - (C) 20
  - (D) 200

- 11. Which of the following is closest in value to 5?
  - (A) 4.5
  - (B) 5.009
  - (C) 5.01
  - (D) 5.101
- 12. Janice went to the butcher and bought six pounds of hamburger. If the bill was \$18.50, which of the following is closest to the cost per pound of the hamburger?
  - \$2.00 (A)
  - \$3.00 (B)
  - (C) \$5.00
  - (D) \$6.00
- 13. Which of the following numbers is closest to the square root of 175?
  - (A) 9
  - (B) 13
  - (C) 22
  - (D) 30
- 14. Laurie was reading a book that had an illustration on every odd-numbered page. If there are 32 numbered pages in the book, how many illustrations are there?
  - (A) 15
  - (B) 16
  - (C) 17
  - (D) 31

- 15. If 6y + 8 = 20, what is the value of 3y + 4?
  - (A) 2
  - (B) 8
  - (C) 10
  - (D) 12
- 16. A lecture hall's maximum capacity of 56 has increased by 75%. What is the new seating capacity after the increase?
  - 42 (A)
  - (B) 70
  - (C) 98
  - (D) 112
- 17. When a number is divided by 8, the quotient is 11 and the remainder is 2. What is the number?
  - (A) 11
  - 22 (B)
  - (C) 72
  - (D) 90

The following graph shows the amount of rainfall in Miller County for the years 1942–1946.

Average Inches of Rainfall in Miller County, 1942–1946

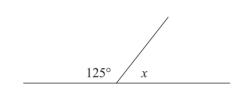


- 18. When did the greatest increase in rainfall occur in Miller County?
  - (A) Between 1942 and 1943
  - (B) Between 1943 and 1944
  - (C) Between 1944 and 1945
  - (D) Between 1945 and 1946
- The temperature at 6 A.M. was 32°. If the temperature increased at a constant rate of 3° per hour all day, what was the temperature at 1 P.M.?
  - (A)  $35^{\circ}$
  - (B) 43°
  - 47° (C)
  - (D) 53°
- 20. What is the volume of a box with length 4 cm, width 3 cm, and height 2 cm?
  - 6 cubic centimeters (A)
  - 9 cubic centimeters (B)
  - (C) 12 cubic centimeters
  - (D) 24 cubic centimeters

# Part Two - Quantitative Comparisons

**Directions:** Using all information given in each question, compare the quantity in Column A to the quantity in Column B. All questions in Part Two have these answer choices:

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.



Column A

x

Column B

21.

55

A rectangle with sides *x* and y has an area of 12.

Column A

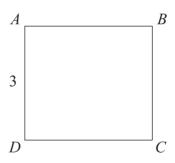
Column B

The length of x22.

The length of y

 $\sqrt{9} + \sqrt{25}$ 23.

 $\sqrt{9+25}$ 



The quadrilateral ABCD has an area of 12.

24. Column A Column B

> The perimeter of ABCD

15

# Answer choices for all questions on this page.

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.

Column B

- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

Martha had \$20. She gave half of her money to her sister, Linda. Linda now has \$30.

	Column A	Column B
25.	The amount of money Martha now has	The amount of money Linda had originally

$$4x + 7 = 63$$
$$\frac{y}{3} + 6 = 15$$

	Column A	Column B
26.	x	у

	Columna	Column D
27.	The area of a rectangle with length 3 and width 4	The area of a square with a side of 3
	length 3 and	•

Column A

# **Number of Cookies Eaten Each Day**

Wednesday	3
Thursday	2
Friday	1
Saturday	3

Column B

28.	The average number	The number of
	of cookies eaten	cookies eaten on
	each day	Thursday

Column A

	Column A	Column B
29.	$\sqrt{0.64}$	$\sqrt{6.4}$

# Answer choices for all questions on this page.

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

Amy bought 5 oranges and 6 peaches. The total price of the fruit was \$1.10.

Column A Column B

30. The cost of one The cost of one orange peach

Column A Column B  $-(5)^6$  $(-5)^6$ 31.

> a represents an odd integer greater than 9 and less than 15.

b represents an even integer greater than 9 and less than 15.

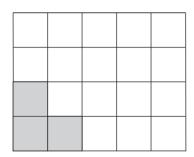
	Column A	Column B
32.	$a \times 3$	$b \times 4$

A 12-sided die with faces numbered 1 through 12 is rolled.

Column B Column A The probability The probability 33. that the result is that the result is even prime

### Answer choices for all questions on this page.

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.



Column A Column B

34. The fractional part  $\frac{3}{20}$ of the figure that is shaded

> Melvin brought home a large pizza with 12 slices.

	Column A	Column B
35.	The number of slices left if Melvin eats 50% of the pizza	The number of slices left if Melvin eats one-third of the pizza

The original price of a shirt now on sale was \$50.

	Column A	Column B
36.	The price of the shirt after two 20% discounts	The price of the shirt after a single 40% discount

Column B Column A 37. The slope of the The slope of the line with points line 6x - 2y = -8(3, 8) and (5, 2)

# **Section 3 Reading Comprehension**

**36 Questions** 

**Time: 35 Minutes** 

This section contains six short reading passages. Each passage is followed by six questions based on its content. Answer the questions following each passage on the basis of what is stated or implied in that passage. You may write in the test booklet.

#### Questions 1–6

#### Line

1 When most people think of the history 2 of transportation, they think of the invention 3 of the wheel as the starting point. The 4 wheel was invented around 3500 B.C.E.. 5 more than 5,000 years ago. Before then, 6 transportation was a difficult process, 7 especially for those who had anything to 8 carry. During prehistoric times, the only 9 way to get around was to walk. Children 10 and possessions were strapped to someone's 11 back if they needed to be carried. If the 12 load was too heavy for one person, it could be strapped to a pole and carried by two. 14 The sledge was developed as a way to

15 drag a heavy load. Sledges were originally

16 just logs or pieces of animal skin upon 17 which a load was strapped and dragged. In time, runners were put on the sledge, and it evolved to what is now called a sled. Around 5000 B.C.E., the first animals were domesticated, or tamed. Then, donkeys and oxen were used to carry heavy loads and pull sledges. It wasn't until almost 1,500 years later that wheeled vehicles appeared. It is believed that the wheel was invented 26 in Mesopotamia, in the Middle East. About 300 years later, the Egyptians invented the sailboat. These two inventions changed 29 transportation forever.

- The primary purpose of the passage is to
  - describe some of the things people (A) used for transportation long ago
  - (B) describe the reasons that led to transportation discoveries
  - (C) explain the evolution of the sled
  - (D) give a detailed history of transporta-
- 2. The passage suggests that prehistoric man used all of the following for carrying things EXCEPT
  - (A) animals
  - (B) children
  - (C) poles
  - (D) primitive sleds
- 3. The passage implies that early man
  - (A) was incapable of inventing the wheel any earlier than 3500 B.C.E.
  - was interested in farming (B)
  - (C) was interested in finding ways to help carry things
  - was outgoing and friendly (D)

- 4. It can be inferred from the passage that the reason animals were domesticated was
  - to help carry large loads (A)
  - to move people and possessions (B) around quickly
  - to provide family pets (C)
  - to ward off danger (D)
- 5. Which of the following describes the author's attitude toward the invention of the wheel?
  - (A) Admiration
  - (B) Disdain
  - (C) Indifference
  - (D) Regret
- The passage suggests that the sledge was
  - a precursor to the sled (A)
  - invented in conjunction with the (B) wheel
  - (C) made exclusively of animal skin
  - the only tool used for transportation (D) at the time

#### Questions 7-12

#### Line

Bison and buffalo are not the same 1 2 animal. For years, American bison were 3 mistakenly referred to as buffalo. Due to 4 this confusion, there are many references 5 to buffalo in the United States. There is the 6 city of Buffalo in northwestern New York 7 state. In addition, the buffalo appeared 8 on the U.S. nickel for many years at the 9 beginning of the twentieth century. This is 10 often referred to as the "Buffalo Nickel" to 11 distinguish it from the current nickel with 12 Thomas Jefferson on the front. Buffalo are 13 actually found in Asia, Africa, and South

14 America. Bison roamed the North American 15 western plains by the millions just a couple of centuries ago. Because the bison were so widely hunted, however, their numbers fell greatly. In fact, as of a century ago, there were only about 500 left. They were deemed near extinction, but due to conservation efforts, their numbers have increased. There are approximately 50,000 bison living today in protected parks. Though they may never be as abundant as they once were, they are not in danger of extinction as long as they

26 remain protected.

- 7. The primary purpose of the passage is to
  - (A) applaud conservation efforts
  - explain the genetic difference (B) between the bison and the buffalo
  - explain why people confuse the (C) buffalo and the bison
  - (D) give some background on the American bison
- 8. The passage implies that the primary difference between the buffalo and the bison is
  - (A) their geographic location
  - (B) their number
  - (C) their size
  - (D) when they existed
- 9. As used in line 19, the word "deemed" most closely means
  - (A) found
  - (B) hunted
  - (C) ruled
  - (D) eaten
- 10. According to the passage, what can be hoped for as long as the American bison is protected?
  - They will be as plentiful as they (A) once were.
  - They will disturb the delicate eco-(B) logical balance in the plains.
  - (C) They will face even greater dangers.
  - (D) They will probably not die out.

- 11. According to the passage, the primary reason that the American bison is no longer near extinction is
  - (A) conservation efforts
  - (B) lack of interest in hunting them
  - (C) loss of value of their fur
  - (D) the migration of the animals
- 12. In line 6, the author mentions the city of Buffalo in order to
  - (A) criticize a hunting practice
  - establish the reason for a particular currency
  - (C) illustrate a common misunderstanding
  - (D) pinpoint the first sighting of buffalo in New York

#### Questions 13-18

#### Line

- The Greek philosopher Aristotle 1
- 2 had many students, but perhaps none so
- 3 famous as Alexander the Great. As a child,
- 4 Alexander was known for his intelligence
- 5 and bravery. The lessons he learned from
- 6 Aristotle left him with a lifelong love of
- 7 books and learning. But it was not his love
- 8 of books that made him famous. Alexander,
- 9 in 336 B.C., became the king of a small
- 10 Greek kingdom called Macedonia. He was
- 11 only twenty at the time. He went on to

- 12 invade country after country: Persia (now
- 13 known as Iran), Egypt, and all the way
- 14 to parts of India and Pakistan. Alexander
- 15 conquered most of what was then the
- 16 "civilized world." He brought with him the
- 17 Greek way of thinking and doing things. He
- 18 is considered one of the great generals and
- kings of history and is responsible for the
- 20 spread of Greek culture throughout much of
- 21 the world.

- 13. Which of the following would be the best title for the passage?
  - "Alexander the Great: King and (A) Conqueror"
  - "Aristotle: Teacher of the Kings" (B)
  - (C) "Greek Culture"
  - "The History of Macedonia" (D)
- 14. As used in line 16, the word "civilized" most closely means
  - barbaric (A)
  - (B) educated
  - (C) friendly
  - (D) well-mannered
- 15. The tone of the passage is most like that found in
  - (A) a diary entry from an historian
  - a letter from an archeologist (B)
  - a philosophy journal (C)
  - a reference book (D)

- 16. According to the passage, one of the things that was so impressive about Alexander was
  - his ability to teach (A)
  - his great integrity
  - (C) his handsome features
  - his intelligence and culture (D)
- 17. The passage suggests that Aristotle
  - (A) encouraged Alexander to spread culture
  - helped foster Alexander's love of (B)
  - (C) supported Alexander's military
  - (D) taught Alexander military strategy
- 18. According to the passage, when Alexander invaded a country, he
  - enslaved citizens (A)
  - freed oppressed people (B)
  - (C) spread Greek ideas
  - (D) toppled monuments

#### Questions 19-24

#### Line

5

Everyone has had attacks of the hiccups, or hiccoughs, at one point in his or her life. Few people, however, think about what is happening to them and how hiccups begin and end.

The diaphragm is a large muscle, 6 shaped like a dome, that sits at the base of the chest cavity. As one breathes, the diaphragm gently contracts and relaxes to help the process. Occasionally, an irritation near the diaphragm or a disease may cause the muscle to spasm, or contract suddenly. The spasm will suck air into the lungs past the vocal cords. A small flap called the epiglottis tops the vocal cords so that food will not accidentally enter into

17 the windpipe. The sudden spasm of the diaphragm causes the epiglottis to close quickly. Imagine the pull of air into the vocal cords from the spastic diaphragm hitting the closed epiglottis. This moves the vocal cords, causing the "hic" sound of the hiccup. Although most people don't really worry about the hiccups, attacks may 25 last for days. The exhaustion of hiccupping for days on end has been fatal in certain rare cases. Home remedies abound—from breathing into paper bags to squeezing on pressure points that supposedly relax the diaphragm.

- 19. The primary purpose of the passage is to
  - (A) describe a common occurrence
  - (B) prescribe a treatment
  - (C) settle a dispute
  - warn about a danger (D)
- 20. According to the passage, one possible cause of hiccups is
  - (A) a sudden rush of air
  - an irritant near the diaphragm (B)
  - breathing in and out of a paper bag (C)
  - the closing of the epiglottis (D)
- 21. As used in line 24, "attacks" most closely means
  - (A) advances
  - (B) assaults
  - (C) bouts
  - (D) threats

- The passage suggests that which of the following makes the "hic" sound of the hiccup?
  - The diaphragm (A)
  - The lungs (B)
  - (C) The stomach
  - The vocal cords (D)
- 23. According to the passage, the hiccups can be fatal due to
  - (A) fatigue from days of hiccupping
  - home remedies that are toxic
  - (C) the humiliation of hiccupping for days on end
  - (D) the irritant to the diaphragm
- 24. The author mentions "hiccoughs" in line 2 in order to
  - (A) correct an improper usage
  - (B) define a technical term
  - (C) indicate an alternate spelling
  - (D) weaken a misguided argument

**❸** RC

#### Questions 25-30

#### Line

During the winter months in many 1 2 regions, food can be extremely scarce. For the wildlife of these areas, this can be a great problem unless animals have some 5 mechanism that allows them to adapt. Some 6 animals migrate to warmer climates. Others 7 hibernate to conserve energy and decrease 8 the need for food. Prior to hibernation, an animal will generally eat a lot to build up a 10 store of fat. The animal's system will "feed" 11 off the fat stores throughout the long cold winter months. When the animal hibernates. its body temperature decreases and its body 14 functions slow down considerably. The 15 dormouse's heartbeat, for example, slows 16 down to just a beat every few minutes. Its

17 breathing also becomes slow and its body
18 temperature drops to just a few degrees
19 above the temperature of the ground around
20 it. All these changes decrease the need for
21 fuel and allow the animal to survive long
22 periods without any food. It is a mistake
23 to think that all hibernating animals sleep
24 for the whole winter. In fact, many animals
25 hibernate for short spurts during the winter.
26 They may wake for an interval of mild
27 weather. Scientists have now discovered
28 the chemical that triggers hibernation. If
29 this chemical is injected in an animal in the
30 summer months, it can cause the animal to

31 go into summer hibernation.

- The primary purpose of the passage is to
  - (A) compare the hibernating dormouse to other hibernating animals
  - debunk some common myths about (B) hibernation
  - (C) discuss the discovery of the chemical that causes hibernation
  - explore some basic information (D) about hibernation
- 26. As used in line 7, the word "conserve" most closely means
  - expend (A)
  - (B) help
  - (C) reserve
  - (D) waste
- 27. According to the author, each of the following happens to a hibernating animal **EXCEPT** 
  - (A) it goes into a dream state
  - its body temperature drops (B)
  - its breathing slows (C)
  - its heartbeat slows (D)

- 28. Which of the following can be inferred as a reason a hibernating animal may interrupt its hibernation?
  - (A) A day or two of stormy weather
  - An overabundance of food
  - (C) A week in which there was no snow
  - (D) A week in which the temperature was well above freezing
- 29. According to the author, if the chemical that triggers hibernation is injected into an animal when it would not normally hibernate, the chemical may
  - (A) allow the animal to shed extra fat
  - cause an out-of-season hibernation (B)
  - cause body functions to slow to a (C) halt
  - (D) decrease an animal's need for food
- 30. The tone of the passage is best described as
  - (A) amazed
  - (B) concerned
  - indifferent (C)
  - (D) informative

**3** RC

#### Questions 31-36

#### Line

The theater is one of the richest art 1 forms. The excitement of opening night can be felt by the people waiting to watch a performance and by the performers and workers backstage waiting for the curtain to go up. Live theater is thrilling because no one really knows how well the play will go until it is performed. Many people collaborate to bring a play to life. There are playwrights, directors, set designers, costumers, lighting technicians, and, of course, actors. If the performance is a musical, the skills of a songwriter, a choreographer (the person who composes the dances), and musicians are also required. The word theater comes from the Greek theatron, which means "a place for 17 seeing." One concept from Greek theater that is still seen in some plays today is the 19 "Greek Chorus." This consists of several actors/characters watching the action of the

play (almost like the audience) and then commenting on what they just saw with either reactions or dialogue. Although most people think of the theater in terms of a play performed on the stage, theater has taken on a much broader meaning in the modern world. You may find yourself walking into a theater with no seats in the rows. Instead, you are seated among the set pieces, which 30 makes you part of the setting. Sometimes theater may come to life on a street corner, or in a classroom. The excitement of theater is in its very nature—it is an art form that changes as it is interpreted in different ways by different people. That is probably why the works of the greatest playwright of all time, William Shakespeare, are still performed and enjoyed today, both in classic and new interpretations.

- 31. The best title for the passage might be
  - (A) "A Brief History of Theatrical Productions"
  - (B) "Modern Theater: Adventures in Acting"
  - (C) "Shakespeare: Our Greatest Playwright"
  - "The Excitement of Theater" (D)
- 32. According to the passage, the primary reason that theater is so exciting is that
  - (A) it derives from a Greek custom
  - it is performed live (B)
  - (C) plays are often well written
  - (D) there are so many people working on it
- 33. The passage suggests which of the following about modern theater?
  - It always draws great attention from the audience.
  - (B) It has been interpreted in a more varied fashion.
  - (C) It is less exciting than classic theater.
  - There are mostly Shakespearean (D) plays performed.

- 34. The author's attitude toward theater can best be described as
  - (A) admiring
  - (B) ambivalent
  - apathetic (C)
  - (D) neutral
- 35. In line 1, the word "richest" is best understood to mean most
  - (A) diverse
  - (B) entertaining
  - terrifying (C)
  - wealthy (D)
- 36. The passage suggests that the plays of Shakespeare
  - (A) are more often given new interpretations today than at any other time
  - are more popular today than during (B) Shakespeare's time
  - have been performed in a variety of (C) ways
  - will always be considered the (D) world's greatest



# Section 4 **Mathematics Achievement**

#### **47 Questions**

**Time: 40 Minutes** 

Each question is followed by four suggested answers. Read each question and then decide which one of the four suggested answers is best.

Find the row of spaces on your answer document that has the same number as the question. In this row, mark the space having the same letter as the answer you have chosen. You may write in your test booklet.

#### SAMPLE QUESTION:

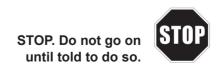
Sample Answer

 $A \bigcirc C \bigcirc$ 

What is the perimeter of an equilateral triangle with a side length of 4 in?

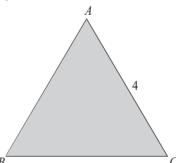
- 8 in (A)
- (B) 12 in
- (C) 16 in
- (D) 24 in

The correct answer is 12 in, so circle B is darkened.



- 1. In the decimal 0.0987, the digit 9 is equivalent to which of the following?
  - (A)
  - (B)
  - (C) 1,000
  - (D) 10,000
- 2. What is the least common multiple of 6, 9, and 12?
  - (A) 3
  - (B) 36
  - (C) 72
  - (D) 324
- 3. Which of the following equals 5?
  - (A)  $30 12 \div 2 \times (3 + 7)$
  - (B)  $30 12 \div (2 \times 3 + 7)$
  - (C)  $(30-12) \div 2 \times 3 + 7$
  - (D)  $30 12 \div 2 \times 3 7$

- 4.  $\frac{5}{7} + \frac{2}{11} =$ 
  - (A)
  - (B)
  - (C)
  - (D)
- 5.  $7\frac{1}{2}$  hours is how many minutes more than  $6\frac{1}{4}$  hours?
  - (A) 45
  - (B) 60
  - (C) 75
  - 90 (D)



- 6. What is the perimeter of equilateral triangle ABC shown above?
  - 12 (A)
  - 15 (B)
  - (C)
  - It cannot be determined from the (D) information given.

# MA

- 7. Which of the following is 20% of 200?
  - (A) 20
  - (B) 30
  - (C) 40
  - (D) 100

Questions 8–10 refer to the following chart.

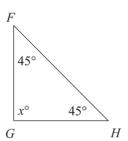
Day	Temperature (in degrees Celsius)	Snowfall (in centimeters)
Monday	2	3
Tuesday	6	3
Wednesday	3	4
Thursday	13	1

- 8. What was the total amount of snowfall for the four-day period shown?
  - (A) 44 cm
  - (B) 40 cm
  - (C) 11 cm
  - (D) 10 cm
- 9. On which day was the snowfall the greatest?
  - (A) Thursday
  - (B) Wednesday
  - Tuesday (C)
  - (D) Monday

- 10. What was the average temperature for each day in the four-day period?
  - 24° (A)
  - 20° (B)
  - (C) 11°
  - (D) 6°
- 11.
  - (A) 4
  - (B) 40
  - (C) 400
  - (D) 4000
- 12.  $5 \times 31 = 100 + _{-}$ 
  - (A) 55
  - (B) 51
  - 50 (C)
  - (D) 36
- 13. Gwen planted six tomato plants. Half of them died. She then planted one more. How many tomato plants does Gwen have now?
  - (A) 3
  - (B) 4
  - 5 (C)
  - (D) 6

- The public library charges one dollar to rent a video game overnight, with a fiftycent charge for each day the video game is late. If Tracey returns a video game three days late, how much does she owe all together?
  - \$1.50 (A)
  - \$2.00 (B)
  - (C) \$2.50
  - (D) \$3.50
- 15.  $0.45 \times 100 =$ 
  - (A) 4,500

  - (B) 450
  - (C) 45
  - 4.5 (D)



- 16. In triangle *FGH* shown above, the value of angle x, in degrees, is
  - (A) 30
  - (B) 45
  - (C) 50
  - (D) 90

- If a dozen eggs cost \$1.20, then 3 eggs cost
  - (A) 30¢
  - (B) 36¢
  - (C) 40¢
  - (D) \$3.60
- Boris and his friend Bruce collect baseball cards. If Bruce has 12 baseball cards and Boris has three times as many baseball cards as Bruce, what is the average number of cards in the boys' collections?
  - (A) 7.5
  - (B) 18
  - (C) 24
  - (D) 48
- 19. What is the perimeter of a rectangle with length 3 and width 2?
  - 6 (A)
  - 8 (B)
  - (C) 10
  - (D) 12
- - (A)
  - (B)
  - (C)
  - (D)

# MA

- 21. If Kenny can run three miles in 45 minutes, how long will it take him to run five miles?
  - (A) 1 hour
  - 1 hour 15 minutes
  - (C) 1 hour 30 minutes
  - (D) 2 hours
- 22. Which fraction is greater than  $\frac{5}{11}$ ?
  - (A)
  - (B)
  - (C)
  - (D)
- 23. If the perimeter of a square is 36, what is its area?
  - (A) 16
  - (B) 36
  - (C) 64
  - (D) 81
- 24. Maureen studied for two hours before school. After school, she studied for twice as long as she had before school. What was the total number of hours she studied in the day?
  - (A)
  - 6 (B)
  - 8 (C)
  - (D) 12

- $\frac{40(37+63)}{8}$  = 25.
  - (A) 450
  - 500 (B)
  - 1,250 (C)
  - (D) 4,000
- $26. \quad 0.347 =$ 
  - (A)  $\frac{7}{10} + \frac{4}{100} + \frac{3}{1,000}$
  - (B)  $\frac{3}{100} + \frac{4}{10} + \frac{7}{100}$
  - (C)  $\frac{4}{100} + \frac{3}{10} + \frac{7}{1,000}$
  - (D)  $\frac{3}{10} + \frac{4}{1,000} + \frac{7}{100}$
- 27. Which is the prime factorization of 36?
  - (A)  $3 \times 3 \times 3 \times 2$
  - (B)  $3 \times 3 \times 2 \times 2$
  - $3 \times 2 \times 2 \times 2$ (C)
  - (D)  $6 \times 3 \times 2$

### Questions 28–30 refer to the following chart.

Train Fares from Monroeville to Perkins' Corner

Fares	Weekday Peak	Weekday Off-Peak	Weekend & Holiday
One Way	\$6.00	\$5.00	\$4.50
Round-Trip	\$12.00	\$10.00	\$9.00
10-Trip Ticket	\$54.00	\$45.00	\$40.00
Children Under 11	\$1.00	\$0.50	Free with Paying Adult

- 28. How much would it cost two adults and one child under the age of 11 to travel one way from Monroeville to Perkins' Corner on a weekend?
  - (A) \$25.00
  - (B) \$20.50
  - (C) \$18.00
  - (D) \$9.00
- 29. The price of a weekday peak fare ten-trip ticket is what percent less than the cost of purchasing ten one-way weekday peak fare tickets?
  - 10% (A)
  - 20% (B)
  - (C) 50%
  - 100% (D)

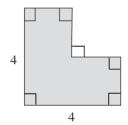
- 30. How much more does it cost for one adult to travel one way during the weekday peak fare period than for one adult to make the trip on the weekend?
  - (A) \$0.50
  - (B) \$0.75
  - \$1.00 (C)
  - (D) \$1.50
- 31. Mr. Schroder swims laps at the community pool. It takes him 5 minutes to swim one lap. If he swims for 60 minutes without stopping, how many laps will he swim?
  - (A)
  - 10 (B)
  - (C) 12
  - (D) 14
- 32.  $10^3 =$ 
  - (A)  $10 \times 3$
  - (B) 10 + 10 + 10
  - $10 \times 10 \times 10$ (C)
  - (D)

# MA

- 33. A DVD player initially cost \$100. During a sale, the store reduced the price by 10%. Two days later, the store reduced the new price by 20%. What was the final price?
  - \$68 (A)
  - (B) \$70
  - (C) \$72
  - (D) \$80
- 34. Mr. Hoffman has a rectangular box that is 10 centimeters wide, 30 centimeters long, and 4 centimeters high. What is the volume of the box?
  - (A)  $44 \text{ cm}^3$
  - (B) 120 cm<sup>3</sup>
  - (C)  $300 \text{ cm}^{3}$
  - $1,200 \text{ cm}^3$ (D)
- 35. Dr. Heldman sees an average of nine patients an hour for eight hours on Monday and for six hours on Tuesday. What is the average number of patients she sees on each day?
  - 54 (A)
  - 63 (B)
  - (C) 72
  - (D) 126
- 36. If q + 9 = 7 p, what is the value of q + p?
  - (A) -16
  - (B) -2
  - (C) 2
  - (D) 16

- 37. Which of the following is the product of two consecutive even integers?
  - (A) 0
  - (B) 15
  - (C) 22
  - (D) 30
- 38. Two triangles, ABC and XYZ, are similar. Triangle ABC has lengths of 3, 4, and 5. Which of the following could be the corresponding lengths of triangle XYZ?
  - (A) 3, 3, and 3
  - (B) 4, 5, and 6
  - (C) 6, 8, and 10
  - (D) 13, 14, and 15
- 39. The perimeter of a square whose area is 169 centimeters is
  - (A) 52
  - (B) 48
  - (C) 44
  - (D) 42
- 40. If three-fourths of the 240 employees at Tigger's Toys are at a party, how many of the employees are NOT at the party?
  - (A) 60
  - (B) 80
  - (C) 120
  - 180 (D)

- 41. Jose and Greg are going on a 20-mile walk for charity. If they walk  $\frac{1}{4}$  of the distance in the first two hours, and  $\frac{1}{5}$  of the entire distance in the next hour and a half, how many miles do they have left to walk?
  - 9 (A)
  - (B) 10
  - (C) 11
  - (D) 12



- 42. What is the perimeter of the shaded area in the figure above?
  - 15 (A)
  - (B) 16
  - (C) 24
  - (D) It cannot be determined from the information given.

- 43. A field hockey player scored an average of 3 goals per game for 12 games. How many points did she score in all 12 games?
  - 4 (A)
  - (B) 20
  - (C) 24
  - (D) 36
- What is the volume of a box with length 8, width 4, and height  $\frac{1}{4}$ ?
  - (A) 8
  - (B)
  - 32 (C)
  - 128 (D)
- 45. The price of a \$30 hat is decreased by 20%. What is the new price of the hat?
  - (A) \$10.00
  - (B) \$12.00
  - (C) \$20.00
  - (D) \$24.00

# MA

- 46. There are 5 oatmeal cookies, 6 brownies, and 8 granola bars in a jar. If an item is selected at random, what is the probability of selecting a brownie?
  - (A)
  - (B)
  - (C)
  - (D)

- Which of the following is equivalent to  $\frac{2}{3}x = 6 - y ?$ 
  - (A) 2x = 6 3y
  - (B) 3y x = 6
  - (C) 2x + 3y = 18
  - (D) 2(x+3y) = 18

# **Essav**

You will have 30 minutes to plan and write an essay on the topic printed on the other side of this page. Do not write on another topic. An essay on another topic is not acceptable.

The essay is designed to give you an opportunity to show how well you can write. You should try to express your thoughts clearly. How well you write is much more important than how much you write, but you need to say enough for a reader to understand what you mean.

You will probably want to write more than a short paragraph. You should also be aware that a copy of your essay will be sent to each school that will be receiving your test results. You are to write only in the appropriate section of the answer sheet. Please write or print so that your writing may be read by someone who is not familiar with your handwriting.

You may make notes and plan your essay on the reverse side of the page. Allow enough time to copy the final form on to your answer sheet. You must copy the essay topic onto your answer sheet, on page 3, in the box provided.

Please remember to write only the final draft of the essay on pages 3 and 4 of your answer sheet and to write it in blue or black pen. Again, you may use cursive writing or you may print. Only pages 3 and 4 will be sent to the schools.

Directions continue on next page.

**REMINDER:** Please write this essay topic on the first few lines of page 3 of your answer sheet.

# **Essay Topic**

If you could change one thing about your school, what would you change and why?

- Only write on this essay question
- Only pages 3 and 4 will be sent to the schools
- · Only write in blue or black pen

NOTES

