



**RELEASED ITEMS**

**MATHEMATICS  
GRADE 5**

**Fall 2006**

**MICHIGAN STATE BOARD OF EDUCATION  
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# PART 1

## DIRECTIONS

This test has three parts. You may **NOT** use a calculator on the first part. You may use open space in this test booklet for scratch paper. No additional sheets may be used.

**There is one type of item on this test: multiple choice.**

Multiple-choice items will require you to choose the best answer from among four answer choices. For these items, use only a No. 2 pencil to mark your answer in your **Answer Document**. If you erase an answer, be sure to erase it completely. If you skip an item, be sure to mark the answer to the next item in the correct place in your **Answer Document**.

### Sample Multiple-Choice Item:

Jackie had 56 trading cards. She gave some of the cards to Wanda. Then Jackie had 23 trading cards left. What was the total number of trading cards Jackie gave to Wanda?

- A 23
- B 33
- C 39
- D 79

For this sample item, the correct answer is **B**. Circle **B** is filled in on the sample item in your **Answer Document**.

You will have at least 30 minutes to finish Part 1 of this test. You will be given additional time if necessary.

1. Once you have reached the word **STOP** in your test booklet, do **NOT** go on to the next page.
2. If you finish early, you may check your work in Part 1 of the test **ONLY**. Do **NOT** look at items in other parts of the test.

If you do not understand any of these directions, please raise your hand.

1 Which list contains the first ten non-negative multiples of 5?

A 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

B  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{3}{5}$ ,  $\frac{4}{5}$ ,  $\frac{5}{5}$ ,  $\frac{6}{5}$ ,  $\frac{7}{5}$ ,  $\frac{8}{5}$ ,  $\frac{9}{5}$ ,  $\frac{10}{5}$

C 0, 5, 10, 15, 20, 25, 30, 35, 40, 45

D 5, 15, 25, 35, 45, 55, 65, 75, 85, 95

2 Which number is a multiple of 9?

A 3

B 19

C 54

D 91

3 Mark made a list of the *first* ten whole number multiples of a number.

0, 3, 6, 9, 12, 15, 18, 21, 24, 27

What was Mark's number?

A 0

B 3

C 27

D 30

- 4 Which of these numbers has exactly two factors?
- A 4
  - B 12
  - C 22
  - D 31
- 5 Which of these numbers is a multiple of 2 and also a multiple of 9?
- A 27
  - B 29
  - C 36
  - D 92
- 6 Taylor says, "I am thinking of a number that is a factor of 50 and a multiple of 5." Which of these numbers could be Taylor's number?
- A 10
  - B 45
  - C 55
  - D 250

- 7 Which number goes in the box to make the number sentence true?

$$(3 \times 5) + (3 \times 20) = 3 \times \square$$

- A 4
  - B 15
  - C 25
  - D 100
- 8 Which expression is equal to  $4 \times 87$ ?

- A  $(4 \times 8) + (4 \times 7)$
- B  $(4 + 80) \times (4 + 7)$
- C  $(4 \times 80) + (4 \times 7)$
- D  $(4 + 80) + (4 + 7)$

- 9 Which correctly completes the number sentence?

$$2 \times 64 = (2 \times 60) + (2 \text{ _____ } )$$

- A + 2
- B  $\times 2$
- C + 4
- D  $\times 4$

- 10** At a factory, 8,292 boxes were placed in 4 containers. If the *same* number of boxes were put in each container, how many boxes were in 1 container?
- A** 273
  - B** 2,020
  - C** 2,073
  - D** 8,288
- 11** Lisa wants to divide 765 pieces of candy evenly among 10 bags. What is 765 divided by 10?
- A** 76
  - B** 76 R 5
  - C** 706 R 5
  - D** 760 R 5
- 12** On a field trip, 144 students rode on 4 buses. There were an equal number of students on each bus. How many students rode on each bus?
- A** 11
  - B** 36
  - C** 140
  - D** 148

13 Which value of  $w$  makes the number sentence below true?

$$w \div 7 = 7$$

- A 0
- B 1
- C 49
- D 77

14 Which value of  $r$  makes the number sentence below true?

$$132 \div r = 33$$

- A 4
- B 11
- C 99
- D 165

15 Which value of  $m$  makes the number sentence below true?

$$456 \div m = 57$$

- A 7
- B 8
- C 399
- D 513

16 Which number equals  $\frac{36}{100}$  ?

- A 0.0036
- B 0.10036
- C 0.36
- D 0.361

17 Which decimal below is equal to six tenths?

- A 61.0
- B 6.1
- C 0.6
- D 0.06

18 Which is equivalent to  $\frac{3}{4}$ ?

- A 0.75
- B  $4 - 3$
- C 
- D three and one-fourth

## PART 2

### **DIRECTIONS**

You will now begin Part 2 of this test. You may use a calculator on this part of the test, and you may use open space in this test booklet for scratch paper. No additional sheets may be used.

If you finish early, you may check your work for Part 2 **ONLY**.

Do **NOT** look at items in other parts of this test.

You will have at least 50 minutes to finish Part 2 of this test.

19 Which list is in order from *least* to *greatest*?

- A 2.1, 2.3, 2.01, 2.11
- B 2.01, 2.1, 2.11, 2.3
- C 2.01, 2.11, 2.1, 2.3
- D 2.1, 2.01, 2.11, 2.3

20 Which number is equal to four and nine hundredths?

- A 0.013
- B 0.13
- C 4.09
- D 4.9

21 Kara has 2 one-dollar bills, some dimes, and 3 pennies in her pocket. The total amount of money she has in her pocket is \$2.43. How many dimes does Kara have in her pocket?

- A 4
- B 24
- C 40
- D 240

22 Martin estimates the difference  $498 - 304$  is about 100. Does Martin's estimate make sense?

- A No, because  $400 - 400 = 0$ .
- B No, because  $500 - 300 = 200$ .
- C Yes, because  $500 - 400 = 100$ .
- D Yes, because  $400 - 300 = 100$ .

23 Manny needed to estimate the sum of the numbers below using mental math.

304	603	801	909
-----	-----	-----	-----

Which method would be *most* reasonable for him to use?

- A Round each number to the nearest hundred. Add the numbers.
- B Add all the numbers in the hundreds place. Add all the numbers in the ones place. Then add these two sums.
- C Add all the numbers in the hundreds place. Add all the numbers in the ones place. Put a 0 between these two sums.
- D Add all the numbers in the hundreds place. Add all the numbers in the ones place. Then subtract these two sums.

24 A customer returned four shirts to a clothing store.

**Shirt Prices**

\$19.10  
\$21.95  
\$12.89  
\$15.47

Which method would be *best* for the cashier to use to determine the amount of money to give back to the customer?

- A guess and check
- B work backward
- C use a calculator
- D draw a picture

25 Which of the following is *closest* to the weight of a bicycle?



- A 2 ounces
- B 10 pounds
- C 2 tons
- D 10 ounces

- 26 Roy is driving a truck carrying sand. He stops in front of a bridge to read this sign.



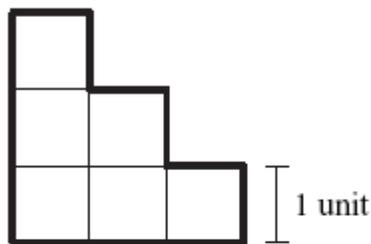
Roy knows that the empty truck weighs 4,000 pounds including the driver. What else does Roy need to know before he decides whether to drive over the bridge?

- A the weight of the bridge
- B how many more loads of sand he needs
- C the weight of the sand in the truck
- D how many trucks have driven over the bridge

27 Delia has some tropical fish in a tank. The water should be kept between  $72^{\circ}\text{F}$  and  $80^{\circ}\text{F}$ . Delia keeps a thermometer in the tank to measure the temperature of the water. Which is the *most* reasonable description of a desirable water temperature for the fish?

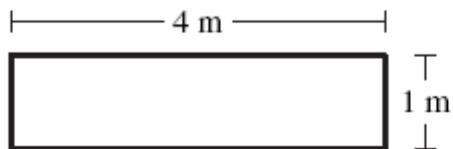
- A between  $15^{\circ}\text{F}$  and  $95^{\circ}\text{F}$
- B between  $55^{\circ}\text{F}$  and  $65^{\circ}\text{F}$
- C between  $73^{\circ}\text{F}$  and  $79^{\circ}\text{F}$
- D between  $86^{\circ}\text{F}$  and  $106^{\circ}\text{F}$

28 Each square in the drawing below is the same size. What is the perimeter of the shape?



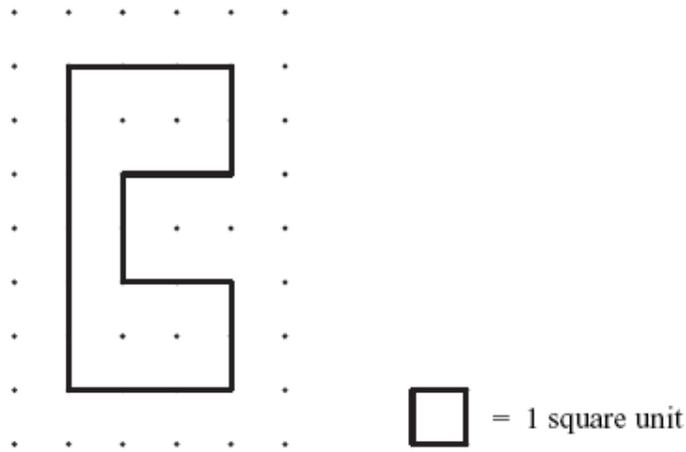
- A 6 units
- B 9 units
- C 12 units
- D 18 units

29 What is the perimeter of the rectangle below?



- A 4 m
- B 5 m
- C 8 m
- D 10 m

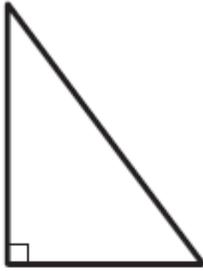
30 What is the area of the “C” shape below?



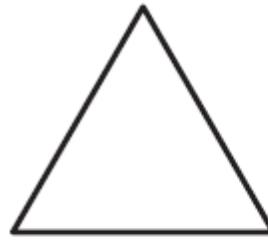
- A 14 sq units
- B 18 sq units
- C 22 sq units
- D 26 sq units

31 Which appears to be an equilateral triangle?

A



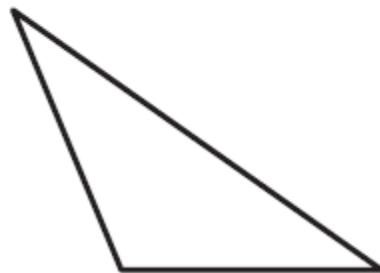
B



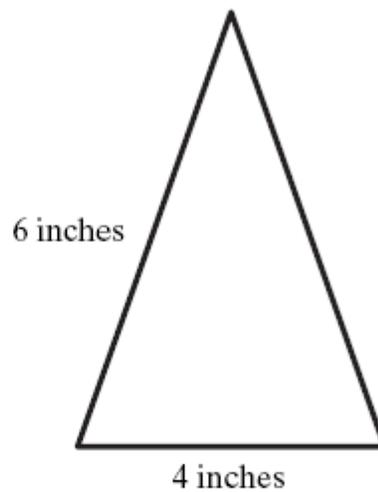
C



D



32 Tina drew the isosceles triangle below.



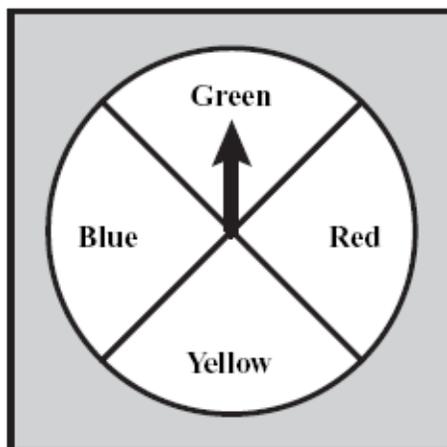
What is the perimeter of this triangle?

- A 10 inches
  - B 14 inches
  - C 16 inches
  - D 24 inches
- 33 Which statement is true about right triangles?
- A Some right triangles are isosceles.
  - B Some right triangles are equilateral.
  - C Some right triangles have two right angles.
  - D Some right triangles may also have an obtuse angle.

34 Which shows the numeral 2 after a slide across the dashed line segment?



- 35 Ron turns the arrow 90 degrees clockwise. To which color will the arrow point after the turn?



- A red
- B blue
- C green
- D yellow

36 Mari moved the paper from Position 1 to Position 2. Which *best* describes how Mari moved the paper?

<input type="radio"/>	9 20100 2 10 20 20 10 20 10 20
	10 20 20 10 20 20 10 20 20 10 20
	10 20 20 10 20 20 10 20 20 10 20
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<input type="radio"/>	

Position 1

	<input type="radio"/>
	<input type="radio"/>
	<input type="radio"/>

Position 2

- A flip
- B turn
- C slide
- D cover

37 What is the range for the data given below?

32, 18, 42, 37, 25

- A 42
- B 34
- C 24
- D 18

38 The Byson Middle School girls' basketball team made the following scores on their last 5 games: 28, 32, 24, 41, and 25. What is the median score for these games?

- A 24
- B 28
- C 30
- D 41

39 What is the range of the group of numbers below?

22, 10, 17, 8, 15, 6, 16

- A 6
- B 8
- C 15
- D 16

## PART 3

### **DIRECTIONS**

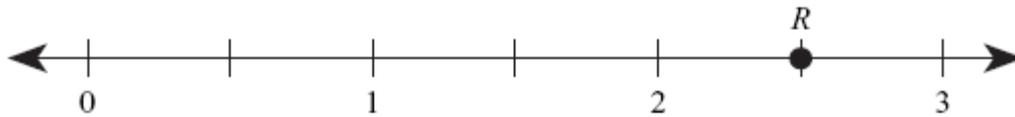
You will now begin Part 3 of this test. You may use a calculator on this part of the test, and you may use open space in this test booklet for scratch paper. No additional sheets may be used.

If you finish early, you may check your work for Part 3 **ONLY**.

Do **NOT** look at items in other parts of this test.

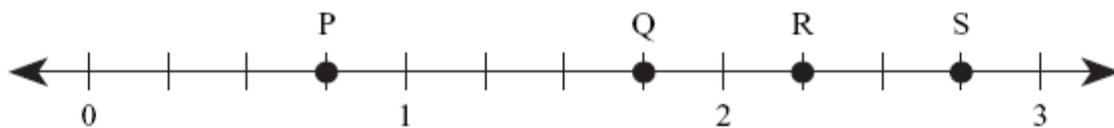
You will have at least 50 minutes to finish Part 3 of this test.

40 Which best represents the value at point *R*?



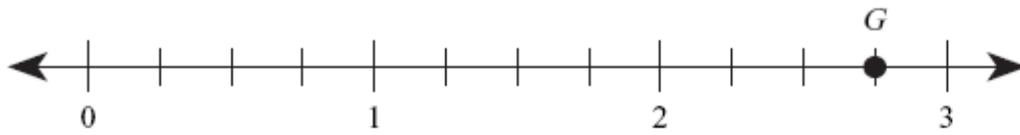
- A  $\frac{2}{5}$
- B  $\frac{2}{3}$
- C  $\frac{3}{2}$
- D  $\frac{5}{2}$

41 Which letter appears to be on a value that is *greater than*  $\frac{9}{4}$ ?



- A P
- B Q
- C R
- D S

42 Which best represents the value at point G?



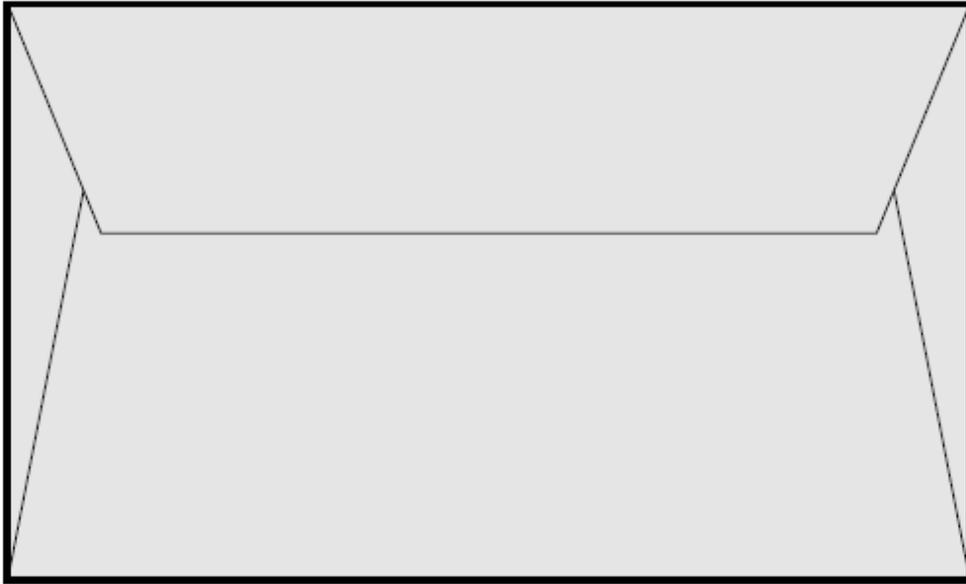
A  $2\frac{1}{2}$

B  $2\frac{3}{4}$

C  $\frac{12}{4}$

D 11

43 Use the inch ruler to measure the perimeter of this envelope.



Which best represents the perimeter of the envelope?

- A 8 inches
  - B 15 inches
  - C 16 inches
  - D 18 inches
- 44 Which type of units are used to measure the area of a rug?
- A cubic units
  - B linear units
  - C square units
  - D it depends on the size of the rug

45 Marilee wanted to know the width of her bedroom door. Which measuring tool should she use to find the width of the door?

- A a ruler
- B a balance
- C a thermometer
- D a measuring cup

46 Which lists the temperatures from coldest to warmest?

- A  $-2^{\circ}\text{F}$ ,  $3^{\circ}\text{F}$ ,  $22^{\circ}\text{F}$ ,  $-33^{\circ}\text{F}$
- B  $-33^{\circ}\text{F}$ ,  $22^{\circ}\text{F}$ ,  $3^{\circ}\text{F}$ ,  $-2^{\circ}\text{F}$
- C  $-2^{\circ}\text{F}$ ,  $-33^{\circ}\text{F}$ ,  $3^{\circ}\text{F}$ ,  $22^{\circ}\text{F}$
- D  $-33^{\circ}\text{F}$ ,  $-2^{\circ}\text{F}$ ,  $3^{\circ}\text{F}$ ,  $22^{\circ}\text{F}$

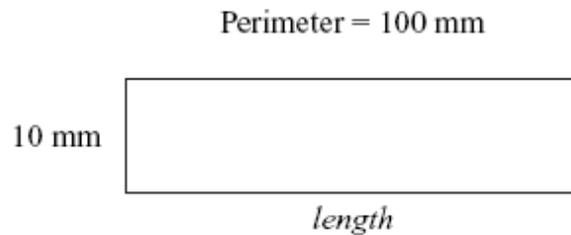
47 Which is the coldest temperature?

- A  $0^{\circ}\text{C}$
- B  $-12^{\circ}\text{C}$
- C  $-8^{\circ}\text{C}$
- D  $16^{\circ}\text{C}$

48 Which is the warmest temperature?

- A  $0^{\circ}\text{F}$
- B  $-2^{\circ}\text{F}$
- C  $5^{\circ}\text{F}$
- D  $-10^{\circ}\text{F}$

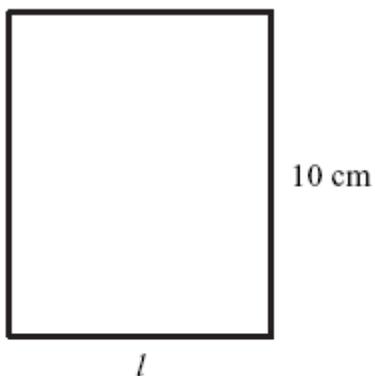
49 The drawing below represents a rectangle with a width of 10 millimeters and a perimeter of 100 millimeters. What is the length of the rectangle?



- A 10 millimeters
- B 40 millimeters
- C 80 millimeters
- D 90 millimeters

50 The area of the rectangle below is  $80 \text{ cm}^2$ , and its width is 10 cm.

$$\text{area} = 80 \text{ cm}^2$$

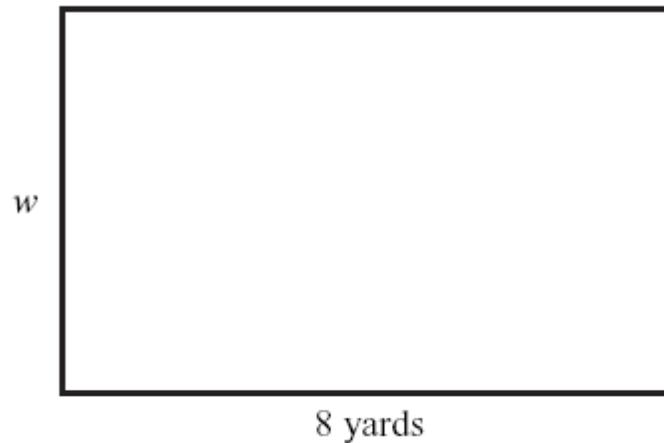


What is the length,  $l$ , of the rectangle?

- A 4 cm
- B 8 cm
- C 30 cm
- D 70 cm

51 The perimeter of this rectangle is 26 yards, and its length is 8 yards.

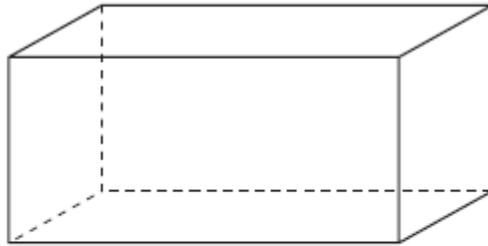
perimeter = 26 yards



What is the width,  $w$ , of the rectangle?

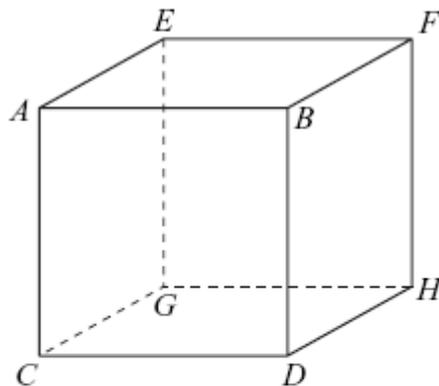
- A 5 yards
  - B 9 yards
  - C 18 yards
  - D 21 yards
- 52 Exactly how many faces does a cube have?
- A 3
  - B 4
  - C 6
  - D 8

53 Which describes how the faces of any rectangular prism are alike?



- A Each face is a square region.
- B Each face is a rectangular region.
- C Each face has the same width.
- D Each face has the same length.

54 Which describes what points  $A$ ,  $D$ ,  $F$ , and  $G$  have in common?



- A They are all faces.
- B They are all edges.
- C They are all solids.
- D They are all vertices.

- 55 Joe's Delivery Service charges \$50.00 for each delivery, plus \$0.25 per mile. Which chart below shows the correct delivery charges for different numbers of miles?

**A**

Delivery Charge	\$50.00
plus 5 miles	\$50.05
plus 10 miles	\$50.10
plus 20 miles	\$50.20
plus 25 miles	\$50.25

**B**

Delivery Charge	\$50.00
plus 5 miles	\$51.25
plus 10 miles	\$52.50
plus 20 miles	\$55.00
plus 25 miles	\$56.25

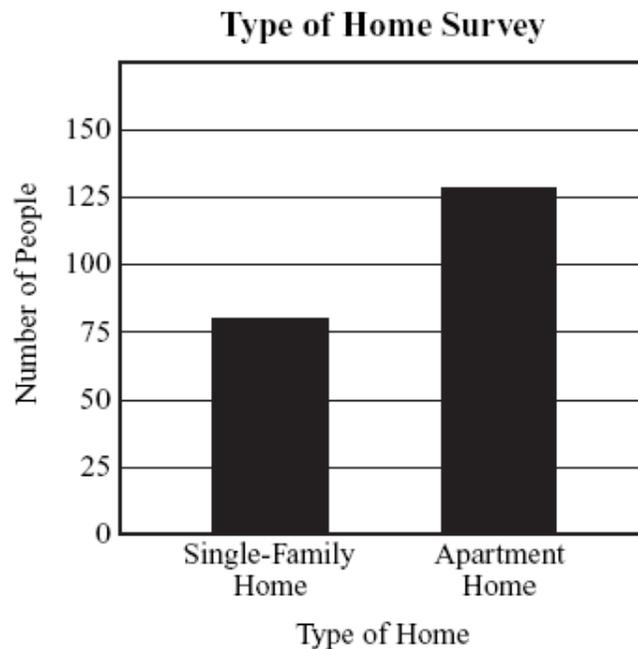
**C**

Delivery Charge	\$50.00
plus 5 miles	\$50.25
plus 10 miles	\$50.50
plus 20 miles	\$50.75
plus 25 miles	\$51.00

**D**

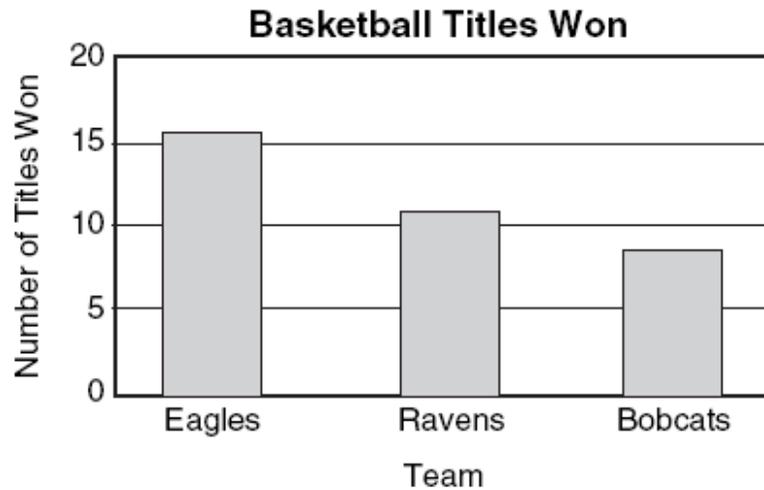
Delivery Charge	\$ 50.00
plus 5 miles	\$ 55.00
plus 10 miles	\$ 65.00
plus 20 miles	\$ 85.00
plus 25 miles	\$110.00

56 Which statement *best* describes the data displayed in the graph below?



- A the number of people who live in single-family homes compared to the number of people who live in apartments
- B the percentage of people who live in single-family homes compared to the number of people who live in apartments
- C the change in the number of people who live in single-family homes as compared to the change in the number of people who live in apartments over time
- D the percentage of people who live in apartments as compared to the total number of people surveyed

- 57 The graph below shows the number of basketball titles won by three different teams.

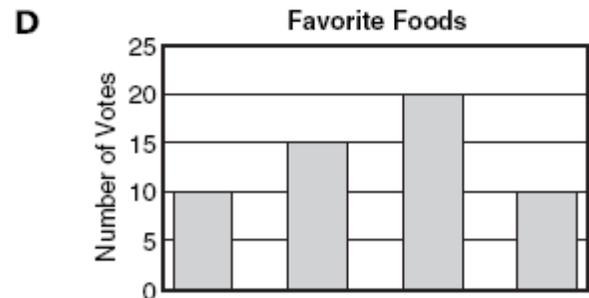
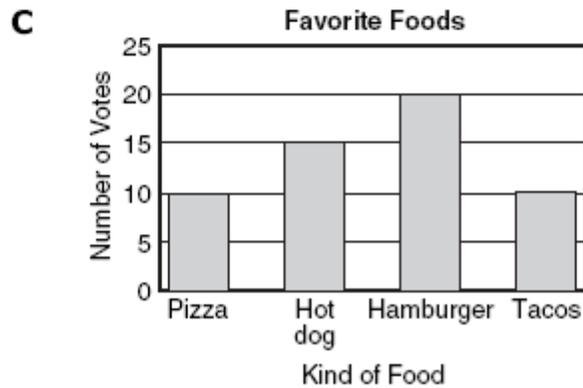
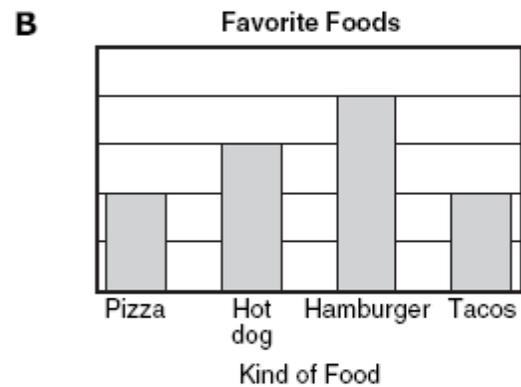
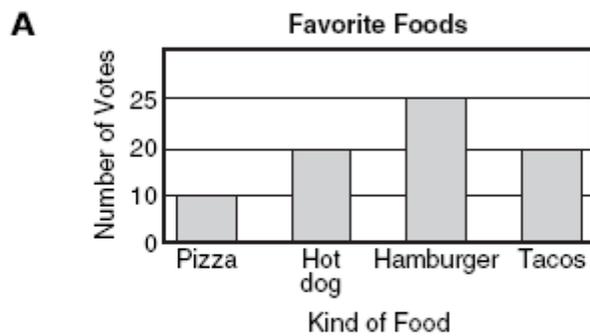


Based on the data in the graph, which statement is true?

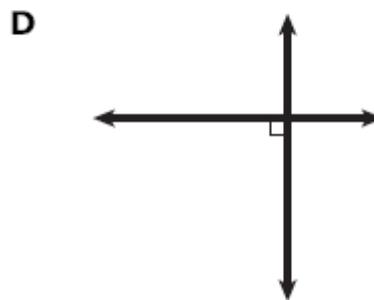
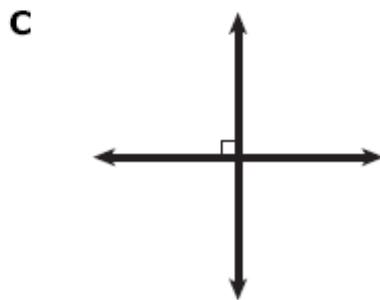
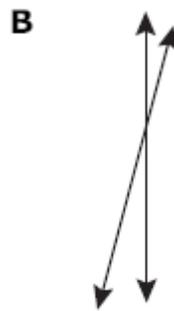
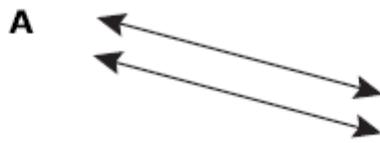
- A The Ravens won the fewest basketball titles.
- B The Bobcats won more titles than the Eagles.
- C The Ravens won twice as many titles as the Bobcats.
- D The Eagles won the greatest number of basketball titles.

58 Which graph is constructed to correctly represent the data in the table below?

Favorite Foods	
Kind of Food	Number of Votes
Pizza	10
Hot dog	15
Hamburger	20
Tacos	10



59 Which pair of lines intersect, but are NOT perpendicular?



60 Which correctly shows the line of symmetry of the letter C?



61 The ceiling of the school gym is 15 feet high. How tall is the gym's ceiling, in yards?

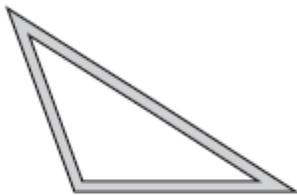
- A 3 yards
- B 5 yards
- C 15 yards
- D 45 yards

62 A square has a perimeter of 20 inches. What is the length of each side of this square?

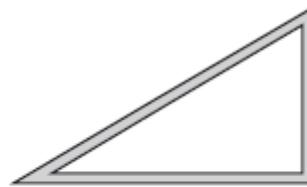
- A 4 inches
- B 5 inches
- C 10 inches
- D 25 inches

63 Martha is building a playhouse. She needs a triangular window with one angle that is larger than a right angle. Which of the following windows should she use?

A



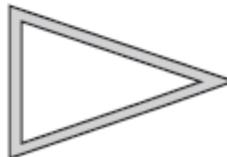
B



C



D



64 The basketball team scored 56 points during the first half of the game and 23 points during the second half of the game. How many points did the team score altogether?

A 33

B 16

C 79

D 5,623

65 A library has received 15 boxes of new labels. There are 140 labels in each box. How many labels has the library received?

A 155

B 210

C 1,550

D 2,100

66 Toni has 8 class periods in one school day. How many class periods does she have in one school year if the school year is 180 days?

A 188

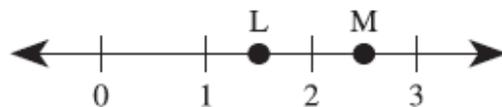
B 1,160

C 1,440

D 2,920

- 67** Harry had 1,215 pennies in a jar. He was going to use the pennies to buy trading cards that cost 38 cents each. Which is closest to the number of trading cards Harry could buy?
- A** 30
  - B** 40
  - C** 80
  - D** 90
- 68** Chris is buying a car that costs twenty-two thousand, five hundred dollars. What is this price in numerals?
- A** \$ 2,250
  - B** \$ 2,500
  - C** \$22,005
  - D** \$22,500
- 69** During an experiment, Terry recognized that there was a constant increase in temperature, degrees F. He recorded the time versus the temperature (time, temperature).
- (1 p.m., 59°F), (2 p.m., 61°F), (3 p.m., 63°F), (4 p.m., )
- The number after 4 p.m. was smudged. What was the temperature at 4 p.m.?
- A** 64°F
  - B** 65°F
  - C** 66°F
  - D** 67°F

- 70 There are 128,490 books in the town library. What is the place value of the 1 in this number?
- A hundreds
  - B thousands
  - C ten thousands
  - D hundred thousands
- 71 Which list shows all the whole number factors of the number 24?
- A 2, 3, 4, 6
  - B 2, 3, 6, 8, 12
  - C 1, 2, 3, 4, 6, 8, 12, 24
  - D 6, 12, 18, 24, 30, 36, 42
- 72 Which of the following decimals would be located between L and M on this number line?

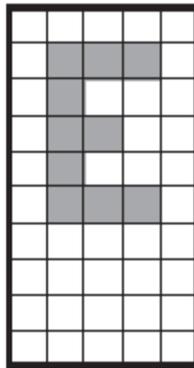


- A 1.25
- B 1.90
- C 2.75
- D 2.90

73 Francis measured the rainfall last night as fifty hundredths of an inch. Which is another correct way to write this number?

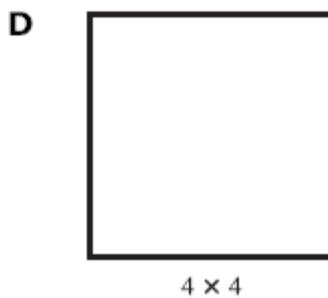
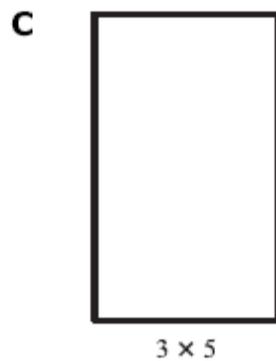
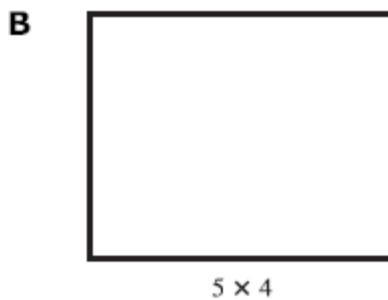
- A 0.05 inches
- B 0.50 inches
- C 50 inches
- D 5000 inches

74 What fraction of this patch is covered by an initial?



- A  $\frac{10}{50}$
- B  $\frac{10}{40}$
- C  $\frac{40}{10}$
- D  $\frac{50}{10}$

75 Which of the following rectangles represents a prime number?



- 76 Matt and Sara had equally-sized pies. Matt ate  $\frac{3}{6}$  of his pie. Sara ate  $\frac{4}{8}$  of her pie. Which sentence is true?
- A** Matt ate more pie than Sara because  $\frac{3}{6}$  is greater than  $\frac{4}{8}$ .
- B** Sara ate more pie than Matt because  $\frac{4}{8}$  is greater than  $\frac{3}{6}$ .
- C** Matt and Sara each ate the same amount of pie because  $\frac{3}{6}$  is equal to  $\frac{4}{8}$ .
- D** Matt and Sara together ate half of a pie because  $\frac{3}{6}$  and  $\frac{4}{8}$  add up to one-half.
- 77 Kelly's recipe calls for  $\frac{1}{2}$  teaspoon of cinnamon. She only has a  $\frac{1}{8}$  teaspoon measuring spoon. How many times should she fill the  $\frac{1}{8}$  teaspoon measuring spoon to measure a total of  $\frac{1}{2}$  teaspoon?
- A** 2
- B** 3
- C** 4
- D** 8

78 Which of the following is equivalent to  $2\frac{3}{4}$ ?

A  $\frac{6}{4}$

B  $\frac{8}{3}$

C  $\frac{11}{4}$

D  $\frac{11}{3}$

79 Which number is *less than*  $\frac{11}{4}$  ?

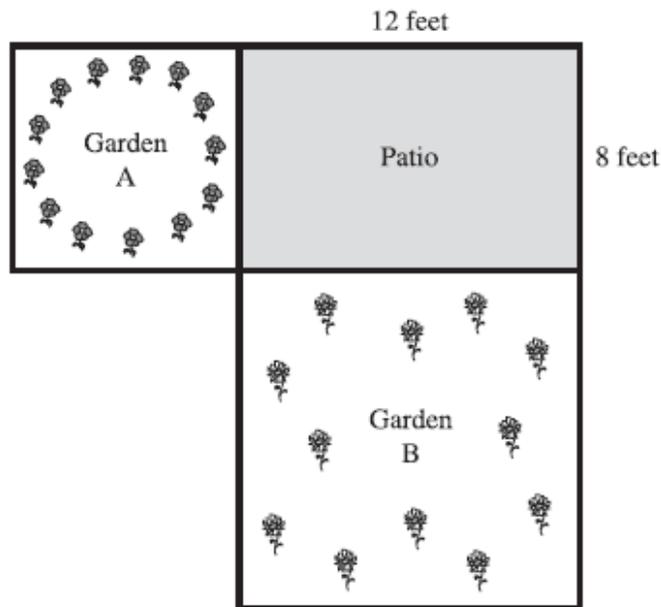
A  $2\frac{1}{8}$

B  $2\frac{3}{4}$

C  $3\frac{1}{2}$

D  $3\frac{1}{4}$

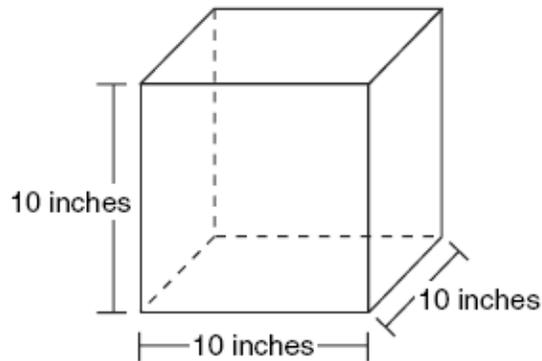
80 Mina has 2 square gardens connected to her 8-foot by 12-foot patio, as shown below.



How many more square feet is Garden B than Garden A?

- A 64 square feet
- B 80 square feet
- C 144 square feet
- D 208 square feet

- 81 Blake needs to wrap a gift box. The box is in the shape of a cube with the dimensions shown below.



What is the *least* amount of wrapping paper he will need to completely cover the box?

- A 600 square inches
- B 110 square inches
- C 30 square inches
- D 10 square inches

- 82 Travis hiked west on a hiking trail. He hiked  $\frac{5}{8}$  of the way along the trail. Then he stopped for lunch. After lunch, he continued hiking west. He hiked another  $\frac{3}{8}$  of the trail and set up his tent. Where did Travis set up his tent?
- A at the end of the trail
  - B at the middle of the trail
  - C  $\frac{1}{4}$  of the way along the trail
  - D  $\frac{15}{16}$  of the way along the trail
- 83 A candle was 101.01 millimeters tall. After burning, it was 90.9 millimeters tall. How much of the candle burned?
- A 10.11 mm
  - B 91.92 mm
  - C 110.11 mm
  - D 191.91 mm

**84** Mrs. Brooks had to mail 4 large envelopes. The total postage was \$5.68. Postage for each envelope was the *same* amount. What did it cost to mail each envelope?

**A** \$1.12

**B** \$1.17

**C** \$1.42

**D** \$1.44

**85** Which is equal to 10.1?

**A**  $\frac{1}{10}$

**B**  $\frac{10}{1}$

**C**  $1\frac{1}{10}$

**D**  $10\frac{1}{10}$

**86** Monica used the number sentence  $108 \div 4 = 27$  to check her answer to a homework problem. Which of the following could be Monica's homework problem?

**A**  $4 \times 27 = \square$

**B**  $4 \times 108 = \square$

**C**  $108 + 4 = \square$

**D**  $108 - 27 = \square$

87 Which fraction is *greater* than 1?

A  $\frac{7}{9}$

B  $\frac{3}{3}$

C  $\frac{5}{4}$

D  $\frac{1}{2}$

88 What is the sum  $\frac{5}{6} + \frac{5}{6}$ ?

A  $\frac{10}{12}$

B  $\frac{25}{36}$

C  $\frac{10}{6}$

D  $2\frac{5}{6}$

89 Which value of  $f$  makes the number sentence below true?

$$\frac{1}{8} + f = \frac{9}{8}$$

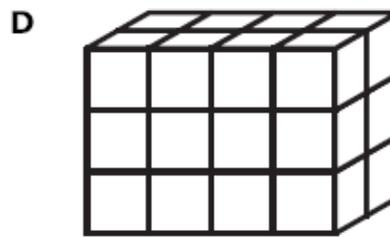
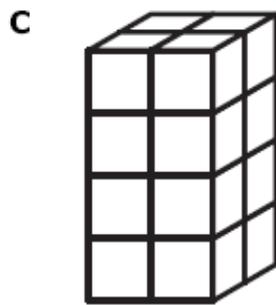
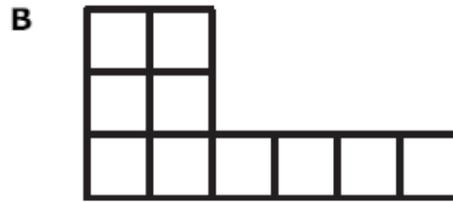
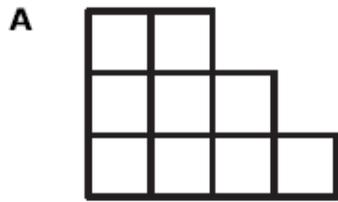
A  $\frac{8}{8}$

B  $\frac{9}{8}$

C  $\frac{10}{8}$

D 9

90 Which geometric model *best* represents  $2 \times 3 \times 4$ ?



91 Gina has a roll of tape that is 9.34 yards long. She uses 2.50 yards of the tape. How much tape is left on the roll?

- A 6.84 yards
- B 7.24 yards
- C 7.84 yards
- D 11.84 yards

## Scoring Key: Part 1

Item No.	Correct Answer	GLCE	Type	Description
1	C	N.ME.04.05	Core-NC	List factors & multiples
2	C	N.ME.04.05	Core-NC	List factors & multiples
3	B	N.ME.04.05	Core-NC	List factors & multiples
4	D	N.MR.04.07	Core-NC	Use factors & multiples to compose/decompose numbers
5	C	N.MR.04.07	Core-NC	Use factors & multiples to compose/decompose numbers
6	A	N.MR.04.07	Core-NC	Use factors & multiples to compose/decompose numbers
7	C	N.ME.04.09	Core-NC	Solve x problems using the distributive property
8	C	N.ME.04.09	Core-NC	Solve x problems using the distributive property
9	D	N.ME.04.09	Core-NC	Solve x problems using the distributive property
10	C	N.FL.04.11	Core-NC	Divide whole numbers by 1-digit numbers and by 10
11	B	N.FL.04.11	Core-NC	Divide whole numbers by 1-digit numbers and by 10
12	B	N.FL.04.11	Core-NC	Divide whole numbers by 1-digit numbers and by 10
13	C	N.FL.04.12	Core-NC	Find value of unknowns in equations
14	A	N.FL.04.12	Core-NC	Find value of unknowns in equations
15	B	N.FL.04.12	Core-NC	Find value of unknowns in equations
16	C	N.MR.04.19	Core-NC	Translate between fractions & decimals
17	C	N.MR.04.19	Core-NC	Translate between fractions & decimals
18	A	N.MR.04.19	Core-NC	Translate between fractions & decimals

NC=Non Calculator

## Scoring Key: Part 2

Item No.	Correct Answer	GLCE	Type	Description
19	B	N.ME.04.15	Core	Know decimals up to two places & relate to money
20	C	N.ME.04.15	Core	Know decimals up to two places & relate to money
21	A	N.ME.04.15	Core	Know decimals up to two places & relate to money
22	B	N.FL.04.35	Core	Know & use approximation appropriately
23	A	N.FL.04.35	Core	Know & use approximation appropriately
24	C	N.FL.04.35	Core	Know & use approximation appropriately
25	B	M.PS.04.02	Core	Give answers to a reasonable degree of precision
26	C	M.PS.04.02	Core	Give answers to a reasonable degree of precision
27	C	M.PS.04.02	Core	Give answers to a reasonable degree of precision
28	C	M.TE.04.06	Core	Know and understand formulas for P/A of square, rect
29	D	M.TE.04.06	Core	Know and understand formulas for P/A of square, rect
30	A	M.TE.04.06	Core	Know and understand formulas for P/A of square, rect
31	B	G.GS.04.02	Core	Identify basic geometric shapes and solve problems
32	C	G.GS.04.02	Core	Identify basic geometric shapes and solve problems
33	A	G.GS.04.02	Core	Identify basic geometric shapes and solve problems
34	C	G.TR.04.05	Core	Recognize transformations of a 2-D object
35	A	G.TR.04.05	Core	Recognize transformations of a 2-D object
36	A	G.TR.04.05	Core	Recognize transformations of a 2-D object
37	C	D.RE.04.02	Core	Order a given set of data, find the median, range
38	B	D.RE.04.02	Core	Order a given set of data, find the median, range
39	D	D.RE.04.02	Core	Order a given set of data, find the median, range

## Scoring Key: Part 3

Item No.	Correct Answer	GLCE	Type	Description
40	D	N.MR.04.22	Core	Locate fractions w/denominators $\leq 12$ on number line
41	D	N.MR.04.22	Core	Locate fractions w/denominators $\leq 12$ on number line
42	B	N.MR.04.22	Core	Locate fractions w/denominators $\leq 12$ on number line
43	C	M.UN.04.01	Core	Measure using common tools & appropriate units
44	C	M.UN.04.01	Core	Measure using common tools & appropriate units
45	A	M.UN.04.01	Core	Measure using common tools & appropriate units
46	D	M.UN.04.03	Core	Measure & compare integer temperatures in degrees
47	B	M.UN.04.03	Core	Measure & compare integer temperatures in degrees
48	C	M.UN.04.03	Core	Measure & compare integer temperatures in degrees
49	B	M.TE.04.07	Core	Find length of rectangle given width and A or P
50	B	M.TE.04.07	Core	Find length of rectangle given width and A or P
51	A	M.TE.04.07	Core	Find length of rectangle given width and A or P
52	C	G.SR.04.03	Core	Identify attributes of 3-D solids
53	B	G.SR.04.03	Core	Identify attributes of 3-D solids
54	D	G.SR.04.03	Core	Identify attributes of 3-D solids
55	B	D.RE.04.03	Core	Solve problems using data tables, bar graphs
56	A	D.RE.04.03	Core	Solve problems using data tables, bar graphs
57	D	D.RE.04.03	Core	Solve problems using data tables, bar graphs
58	C	D.RE.04.01	Extended	Construct tables and bar graphs from given data
59	B	G.GS.04.01	Extended	Identify, draw , parallel, & intersecting lines
60	D	G.TR.04.04	Extended	Recognize plane figures that have line symmetry

## Scoring Key: Part 3 (continued)

Item No.	Correct Answer	GLCE	Type	Description
61	B	M.TE.04.05	Extended	Convert units of measure within a system
62	B	M.TE.04.08	Extended	Find side of a square given its perimeter or area
63	A	M.TE.04.10	Extended	Know right angles & compare angles to right angles
64	C	N.FL.04.08	Extended-NC	Add and subtract whole numbers fluently
65	D	N.FL.04.10	Extended-NC	Multiply whole numbers & use distributive property
66	C	N.MR.04.14	Extended	Solve problems involving multiplication & division
67	A	N.FL.04.34	Extended	Estimate answers involving +, -, or x
68	D	N.ME.04.01	Extended-NC	Read, write, compare & order numbers to 1,000,000
69	B	N.ME.04.02	Extended-NC	Compose & decompose numbers to 1,000,000
70	D	N.ME.04.03	Extended-NC	Know size & place value of numbers to 1,000,000
71	C	N.ME.04.04	Extended-NC	List all factors & factor pairs of numbers to 50
72	B	N.ME.04.17	Extended	Locate tenths and hundredths on a number line
73	B	N.ME.04.18	Extended	Read, write, interpret, and compare decimals
74	A	N.ME.04.20	Extended	Understand fractions as parts of a set of objects
75	A	N.MR.04.06	Extended-NC	Know prime numbers
76	C	N.MR.04.21	Extended	Explain why equivalent fractions are equal
77	C	N.MR.04.23	Extended	Understand relationships within fraction families
78	C	N.MR.04.25	Extended	Write improper fractions as mixed numbers
79	A	N.MR.04.26	Extended	Compare and order up to three fractions
80	B	M.PS.04.09	Future	Solve problems about P/A of rects in compound shapes

## Scoring Key: Part 3 (continued)

Item No.	Correct Answer	GLCE	Type	Description
81	A	M.PS.04.11	Future	Solve contextual problems about surface area
82	A	N.MR.04.28	Future	Solve fraction problems involving sums & differences
83	A	N.FL.04.32	Future	Add and subtract decimals through hundredths
84	C	N.FL.04.33	Future	$\times$ and $\div$ decimals up to two decimal places
85	D	N.ME.04.16	Future	Know & identify terminating decimals
86	A	N.MR.04.13	Future	Use $\times$ , $\div$ to simplify computations & check results
87	C	N.ME.04.24	Future	Understand improper fractions, locate on # line
88	C	N.MR.04.27	Future	Add and subtract common fractions less than 1
89	A	N.MR.04.29	Future-NC	Find value of unknown in equations with fractions
90	D	N.MR.04.30	Future	$\times$ fractions using repeated $+$ , area or array models
91	A	N.MR.04.31	Future	Solve problems by adding & subtracting decimals