



New York State Testing Program

Mathematics Test Book 1

Grade **6**

March 6–12, 2008



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TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Be sure to read carefully all the directions in the test book.
- Read each question carefully and think about the answer before choosing your response.



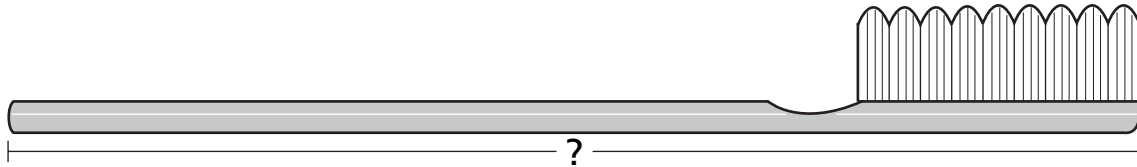
This picture means that you will use your ruler.

Sample A



Use your ruler to help you solve this problem.

How many centimeters long is the toothbrush shown below?



- A 12
- B 13
- C 14
- D 15

Sample B

Kirsten read a number of books, k . Eric read 3 books fewer than Kirsten. What expression can be used to find the number of books Eric read?

- A $k - 3$
- B $k + 3$
- C $3 - k$
- D $3 \times k$

STOP

1

If $8n = 96$, what value of n makes the equation true?

- A 12
- B 88
- C 104
- D 768

2

A 20-gallon container is filled with 6 gallons of gasoline. What fraction of the container is filled with gasoline?

- A $\frac{20}{6}$
- B $\frac{3}{10}$
- C $\frac{6}{10}$
- D $\frac{3}{5}$

Go On

3What number is equivalent to $|-16|$?

A $-\frac{1}{16}$

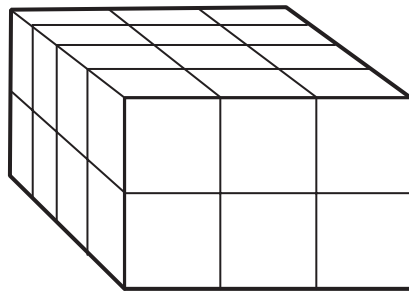
B $\frac{1}{16}$

C -16

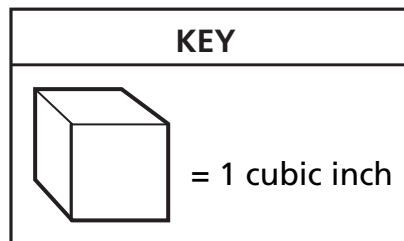
D 16

4

Brady stacked some blocks to form the rectangular prism below.



[not drawn to scale]



What is the volume of the rectangular prism?

A 9 cubic inches**B** 18 cubic inches**C** 24 cubic inches**D** 32 cubic inches

5 Which statement is a proportion?

A $\frac{3}{4} = \frac{4}{8}$

B $\frac{3}{4} = \frac{5}{8}$

C $\frac{3}{4} = \frac{6}{8}$

D $\frac{3}{4} = \frac{7}{8}$

6 At a school carnival, a group of 47 students played the Fish Pond game. Each student in the group won a prize. A stuffed animal was won by 24 students, a rubber ball was won by 7 students, and the rest of the students won a baseball cap. What fraction of the group won a baseball cap?

A $\frac{7}{47}$

B $\frac{16}{47}$

C $\frac{24}{47}$

D $\frac{31}{47}$

Go On

7

Mr. Simpson has 5 boxes of paintbrushes in his art room. After the first week of school, he buys 3 more paintbrushes. The expression below shows the total number of paintbrushes in Mr. Simpson's art room when p represents the number of brushes in each box.

$$3 + p \times 5$$

If each box contains 8 paintbrushes, how many total paintbrushes are in Mr. Simpson's art room?

- A 18
- B 28
- C 43
- D 55

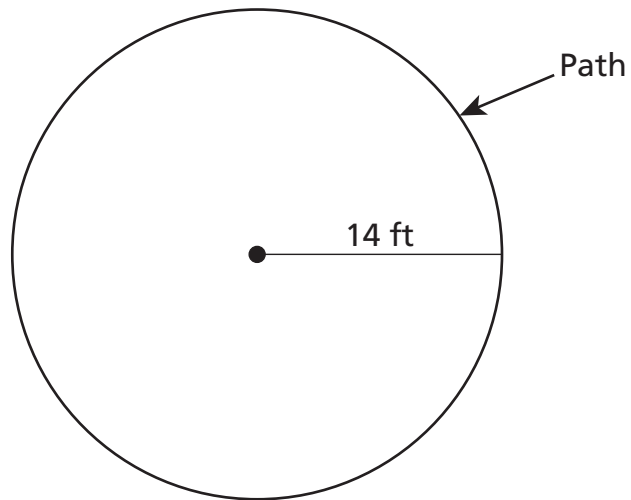
8

A box contains 4 chocolate chip muffins, 2 blueberry muffins, and 1 corn muffin. A muffin is randomly chosen from the box. What is the probability that a blueberry muffin or a corn muffin is chosen?

- A $\frac{1}{3}$
- B $\frac{1}{4}$
- C $\frac{3}{7}$
- D $\frac{4}{7}$

9

The workers at Johnson Farm are creating a circular path that will be used to give pony rides. A diagram of the path is shown below.



[not drawn to scale]

$$C = 2\pi r$$

What is the circumference of the path?

Leave π in your answer.

- A 7π feet
- B 14π feet
- C 28π feet
- D 56π feet

Go On

10

Otto is measuring water for an experiment. He fills two different containers: a 2-liter container and a half-liter container. He uses each container only once. How many milliliters of water does Otto measure for his experiment?

| |
|-----------------------------|
| 1 liter = 1,000 milliliters |
|-----------------------------|

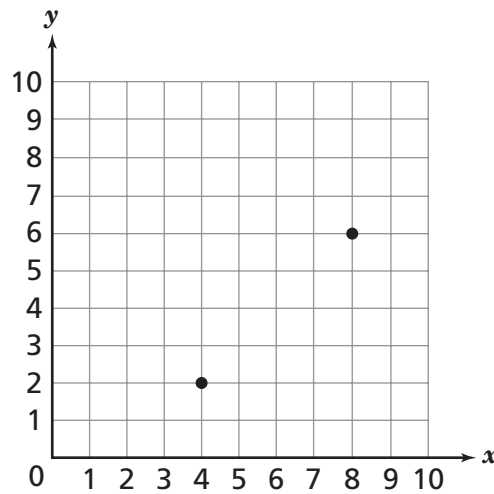
- A 25
- B 2.5
- C 250
- D 2,500

11

Nan lives $13\frac{1}{2}$ miles from the airport. Felipe lives $6\frac{1}{4}$ miles from the airport. How many more miles does Nan live from the airport than Felipe?

- A $7\frac{1}{8}$
- B $7\frac{1}{6}$
- C $7\frac{1}{4}$
- D $7\frac{1}{2}$

- 12** Carlos plots two points on the grid below.



He wants to plot two more points and then connect all four points to form a square. Which two points should Carlos plot to form a square?

- A** (4, 2) and (8, 6)
- B** (4, 6) and (6, 6)
- C** (4, 2) and (6, 2)
- D** (4, 6) and (8, 2)

- 13** Mr. Cohen wrote the expression below for his 3 cousins to use to find his age.

$$n^2 \times 7 - 3$$

If n represents the number of cousins, what is Mr. Cohen's age?

- A** 12
- B** 18
- C** 36
- D** 60

Go On

14 Paulie multiplies two numbers whose product is 1. If one of the numbers is 2, what is the other number?

A $\frac{2}{1}$

B $\frac{1}{2}$

C 1

D 0

15 The list below shows the number of large bags of popcorn sold each day at a movie theater over five days.

18 19 22 18 23

What is the mean (average) number of large bags of popcorn sold over the five days?

A 18

B 19

C 20

D 22

16 There are 283 students in Wally's school and 59 of them are in the sixth grade. What is the **approximate** percent of students at Wally's school who are in the sixth grade?

A 80%

B 60%

C 40%

D 20%

- 17** Andi walks at a rate, r , of 4 miles per hour. What is the distance, d , that she walks in the time, t , of 3 hours?

$$d = rt$$

- A** 1 mile
- B** 7 miles
- C** 12 miles
- D** 43 miles

- 18** Which exponential expression is equivalent to $8 \times 8 \times 8 \times 8$?

- A** 4^4
- B** 4^8
- C** 8^4
- D** 8^8

- 19** How many pints are equivalent to 10 gallons?

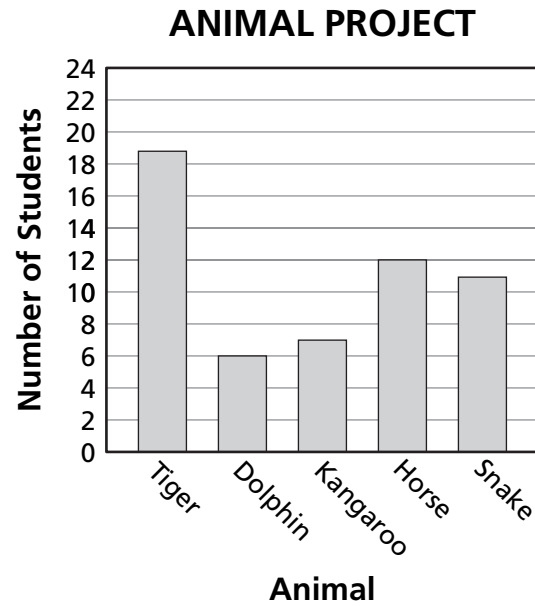
$$\begin{array}{l} 1 \text{ gallon} = 4 \text{ quarts} \\ 1 \text{ quart} = 2 \text{ pints} \end{array}$$

- A** 10
- B** 20
- C** 40
- D** 80

Go On

20

The bar graph below shows the number of students who chose to write about different animals for an animal project.



The combined total for what two animals is the same as the total for the tiger?

- A** kangaroo and horse
- B** dolphin and snake
- C** horse and dolphin
- D** dolphin and kangaroo

21

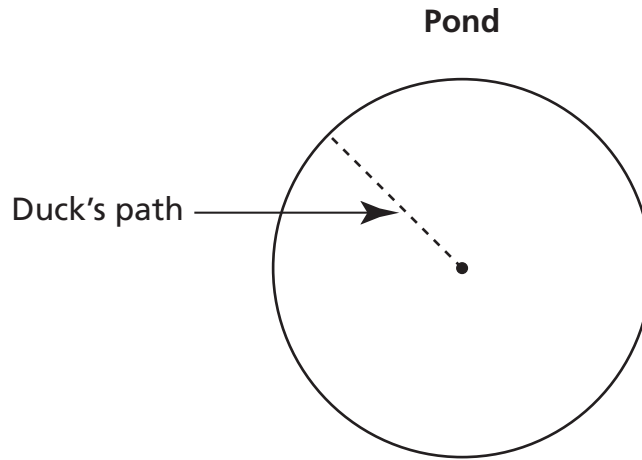
Simplify the expression below.

$$4^2 + 5^2$$

- A** 13
- B** 18
- C** 23
- D** 41

22

A duck swims from the edge of a circular pond to a fountain in the center of the pond. Its path is represented by the dotted line in the diagram below.



What term describes the duck's path?

- A chord
- B radius
- C diameter
- D central angle

23

Ms. Brown asked her students to simplify the expression below.

$$\frac{2}{3} + \frac{1}{4}$$

What is the simplified version of Ms. Brown's expression?

- A $\frac{2}{7}$
- B $\frac{3}{7}$
- C $\frac{3}{12}$
- D $\frac{11}{12}$

Go On

- 24** What is the value of x in the equation below?

$$\frac{3}{5} = \frac{x}{30}$$

- A** 6
- B** 9
- C** 10
- D** 18

- 25** Dory, Gwen, and Tia ran a race. Dory finished in second place. Which set of names shows the possible outcomes for the finish of the race?

- A** Set #1: Gwen, Dory, Tia
Set #2: Tia, Dory, Gwen
- B** Set #1: Dory, Tia, Gwen
Set #2: Tia, Gwen, Dory
- C** Set #1: Tia, Dory, Gwen
Set #2: Gwen, Tia, Dory
- D** Set #1: Tia, Gwen, Dory
Set #2: Gwen, Dory, Tia

STOP



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