



New York State Testing Program

Mathematics Book 1

Grade **6**

Sample Test 2005

TIPS FOR TAKING THE SAMPLE TEST

Here are some suggestions to help you do your best:

- Be sure to read carefully all the directions in the test book.
- You may use your tools to help you solve any problem on the test.
- Read each question carefully and think about the answer before choosing your response.



This picture means that you will use your ruler.



This picture means that you will use your protractor.

Sample A

Samuel picked 150 strawberries at the strawberry patch. He gave away all the strawberries to 5 friends. If Samuel divided the strawberries equally, how many strawberries did each friend receive?

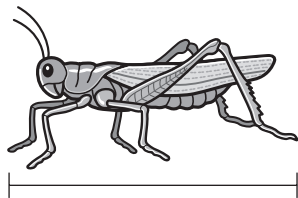
- A 30
- B 50
- C 145
- D 155

Sample B



Use your ruler to help you solve this problem.

Kathy caught a grasshopper like the one shown below.



What is the length, in inches, of the grasshopper?

- F 1
- G $1\frac{1}{2}$
- H 2
- J $2\frac{1}{2}$

STOP

1

A.J.'s soccer team won $\frac{4}{5}$ of its games. What is another way to write this number?

- A** 0.2
- B** 0.4
- C** 0.5
- D** 0.8

2

Simplify the expression below.

$$5^2 - 2^3$$

- F** 2
- G** 4
- H** 17
- J** 19

3

Ray's teacher assigns classroom jobs by having students pick job tickets out of a box. There are 31 tickets for Line Leader, 10 tickets for Paper Passer and 19 tickets for Book Collector. If Ray randomly selects a ticket from the box, what is the probability that he will pull out a ticket for Line Leader?

- A** $\frac{1}{31}$
- B** $\frac{29}{31}$
- C** $\frac{1}{60}$
- D** $\frac{31}{60}$

Go On

4

Cathleen planned to walk her dog for $\frac{3}{4}$ of a mile. After it started to rain, she decided to walk only $\frac{1}{2}$ of that distance. What fraction of a mile did Cathleen walk her dog?

F $\frac{1}{4}$

G $\frac{3}{8}$

H $\frac{4}{6}$

J $\frac{4}{8}$

5

There are 30 pencils left at a school store after Shilo buys a certain number of pencils, p . Delia buys 4 times as many pencils as Shilo. The expression below shows the number of pencils remaining at the store after Delia buys her pencils.

$$30 - 4 \times p$$

How many pencils remain at the store if Shilo bought 3 pencils?

A 14

B 18

C 78

D 104

6

Sasha pours 10 gallons of water into her aquarium. How many quarts of water does Sasha pour into the aquarium?

1 gallon = 4 quarts

F 10

G 14

H 20

J 40

7

Which equation shows the zero property of multiplication?

A $9 \times 0 = 0$

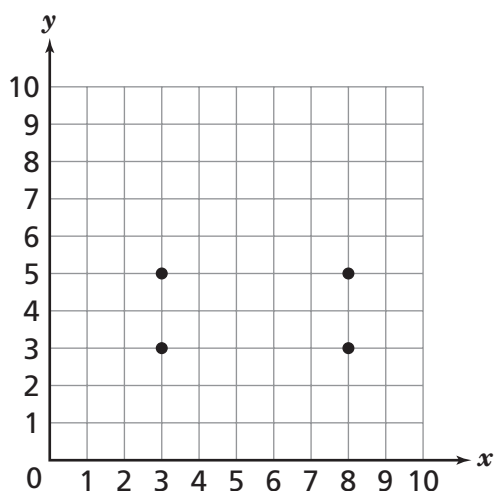
B $9 \times 0 = 9$

C $9 \times 0 = 1$

D $9 \times 1 = 0$

8

Ned wants to draw a pentagon on the grid below by plotting a fifth point and then connecting all of the points.



Which coordinates would **not** complete the pentagon?

F (5, 8)

G (6, 7)

H (7, 2)

J (8, 4)

Go On

9

Jordan went swimming each day of his vacation. On Monday he swam for $\frac{3}{4}$ of an hour, on Tuesday he swam for $2\frac{1}{4}$ hours, on Wednesday he swam for $\frac{1}{2}$ of an hour, on Thursday he swam for $1\frac{3}{4}$ of an hour, and on Friday he swam for $\frac{1}{4}$ of an hour. Which list shows the times in order from **shortest** to **longest**?

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

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

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

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

10

Phillip writes the expression 2^7 . Which is another way to write the same expression using repeated multiplication?

F 2×7

G 7×7

H $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

J $7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7$

11

Ronika asked her classmates to name their favorite pet. She recorded the results in the table below.

FAVORITE PET

Pet	Number of Students
Dog	9
Cat	12
Fish	7
Snake	4

What fraction of the students chose fish as their favorite pet?

- A** $\frac{1}{7}$
B $\frac{7}{25}$
C $\frac{25}{32}$
D $\frac{7}{32}$

12

Tyree's solution for a division equation is 18. Which equation could Tyree have solved?

- F** $\frac{720}{2} = w$
G $\frac{425}{5} = x$
H $\frac{600}{6} = y$
J $\frac{162}{9} = z$

Go On

13

Mr. Bryant writes the expression below.

$$9^2 \div 3(n)$$

What is the value of the expression when $n = 3$?

- A** 27
- B** 9
- C** 3
- D** 2

14

Andre used 345 milliliters of solution in his science experiment. How many liters of solution did Andre use?

1 liter = 1,000 milliliters

- F** 34,500
- G** 3,450
- H** 3.45
- J** 0.345

15

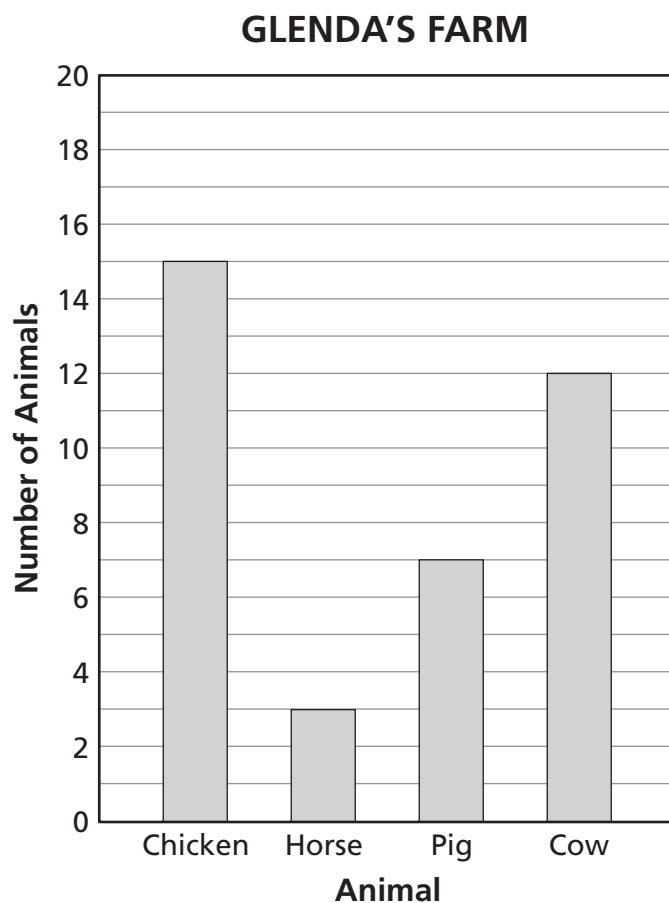
A city council recorded the number of new trees planted at seven of the city's parks. The number of trees planted is recorded below.

29, 11, 13, 29, 7, 21, 16

What is the median number of trees?

- A** 16
- B** 18
- C** 21
- D** 29

The graph below shows the number of animals on Glenda's farm.

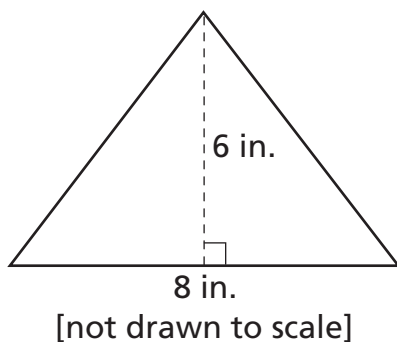


What is the total number of animals on Glenda's farm?

- F** 15
- G** 27
- H** 37
- J** 38

17

Willard has a stained glass window with one triangular piece, as shown below.



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

What is the area, in square inches, of the triangular piece?

- A** 14
- B** 24
- C** 48
- D** 96

18

Carmen put new tile on $\frac{1}{4}$ of her bathroom floor. She then put new carpet on $\frac{5}{8}$ of another section of the same floor. What fraction of the bathroom floor is covered with new tile and new carpet?

- F** $\frac{5}{8}$
- G** $\frac{7}{8}$
- H** $\frac{4}{12}$
- J** $\frac{6}{12}$

- 19** Louis is climbing steps to the top of a monument. After climbing 15 steps, Louis stops to tie his shoe. If there is a total of 75 steps on the monument, what percent of the total number of steps has Louis climbed when he stops to tie his shoe?

A 90%
B 60%
C 20%
D 5%

- 20** Pat threw a football 5 more than twice the number of yards, y , that Gary threw. Which expression can be used to find the number of yards Pat threw the football?

F $2y - 5$
G $2y + 5$
H $5y - 2$
J $5y + 2$

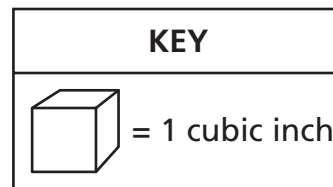
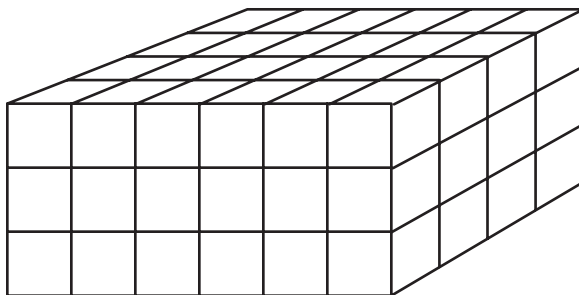
- 21** Francis bought 3 gallons of grape juice for a party. How many pints of juice did Francis buy?

1 gallon = 4 quarts
1 quart = 2 pints

A 2
B 8
C 16
D 24

22

Max is building a rectangular prism out of wooden cubes.



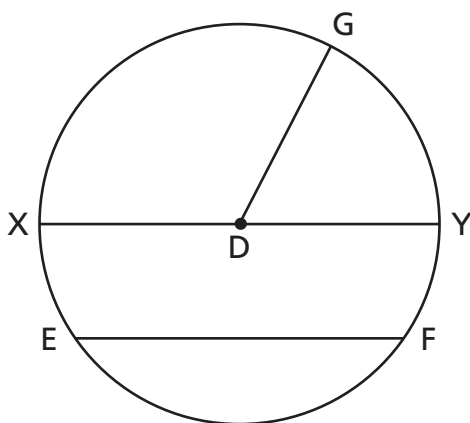
[not drawn to scale]

What is the volume of Max's rectangular prism?

- F** 13 cubic inches
- G** 24 cubic inches
- H** 48 cubic inches
- J** 72 cubic inches

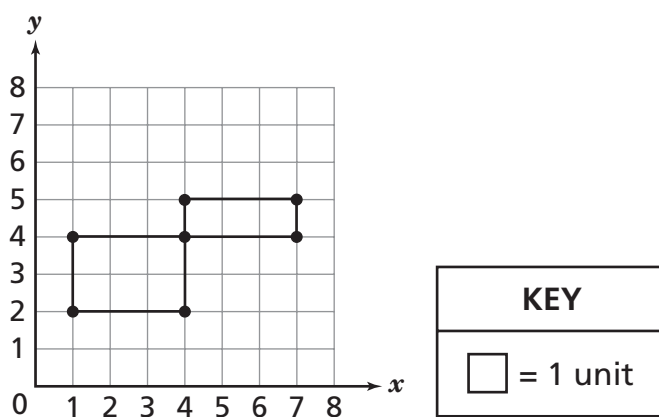
23

What line segment represents a diameter of circle D below?



- A** $\overline{XY}$
- B** $\overline{DY}$
- C** $\overline{DG}$
- D** $\overline{EF}$

- 24** Mitchell drew two rectangles on the grid below.



What is the total perimeter, in units, of the two rectangles?

- F** 8
- G** 9
- H** 10
- J** 18

- 25** Betty made $\frac{3}{4}$ of the baskets she attempted in a basketball game. Which other ratio is equivalent to the number of baskets Betty made?

- A** $\frac{6}{12}$
- B** $\frac{9}{12}$
- C** $\frac{12}{20}$
- D** $\frac{18}{20}$

STOP



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