



New York State Testing Program

Mathematics Book 2

Grade **8**

Sample Test 2005

Name _____

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 writing your response.
- Be sure to show your work when asked. You may receive partial credit if you have shown your work.
- Use your calculator to help you solve the problems on this part of the test.



This picture means that you will use your ruler.

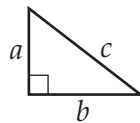


This picture means that you will use your protractor.

Mathematics Reference Sheet

FORMULAS

Pythagorean Theorem



$$c^2 = a^2 + b^2$$

Simple Interest

$$I = prt$$

Distance Formula

$$d = rt$$

CONVERSIONS

Temperature Conversion

$$F = \frac{9}{5}C + 32$$

$$C = \frac{5}{9}(F - 32)$$

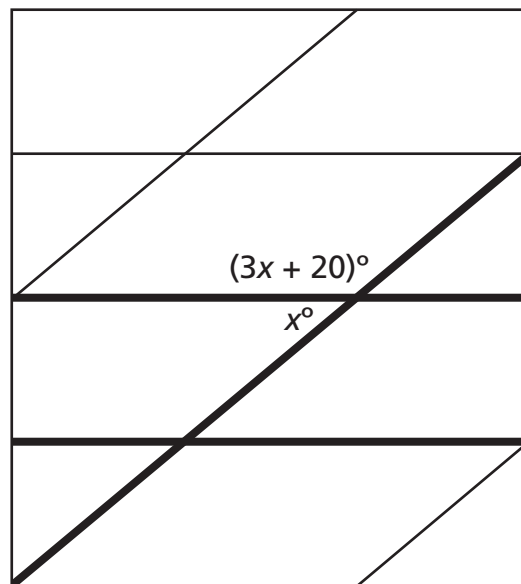
Measurement Conversions

$$1 \text{ mile} = 5,280 \text{ feet}$$

$$1 \text{ yard} = 3 \text{ feet}$$

28

Monisha is making a quilt following the pattern shown below.



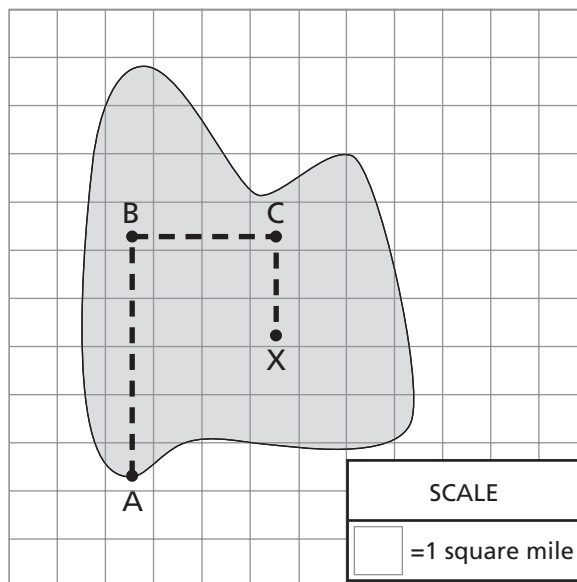
If all the horizontal lines are parallel, what is the value of x ?

Show your work.

Answer _____

Go On

A path on a treasure map is shown on the grid below.



Complete the table below to calculate the total length of the path.

ISLAND PATH

Path Section	Length (in miles)
Length of \overline{AB}	
Length of \overline{BC}	
Length of \overline{CX}	
Total Path Length	

30

The function table below follows a function rule.

x	y
0.5	2
1	1
2	0.5
4	0.25
5	
10	

Part A

Complete the table by filling in the two missing numbers.

Part B

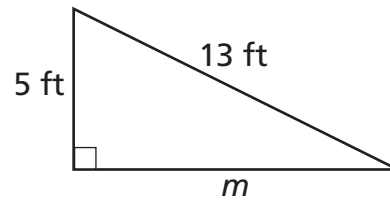
Based on the table, write a function rule that represents the relationship between x and y .

Rule _____

Go On

31

Jenna has a triangular garden, as shown in the diagram below.



[not drawn to scale]

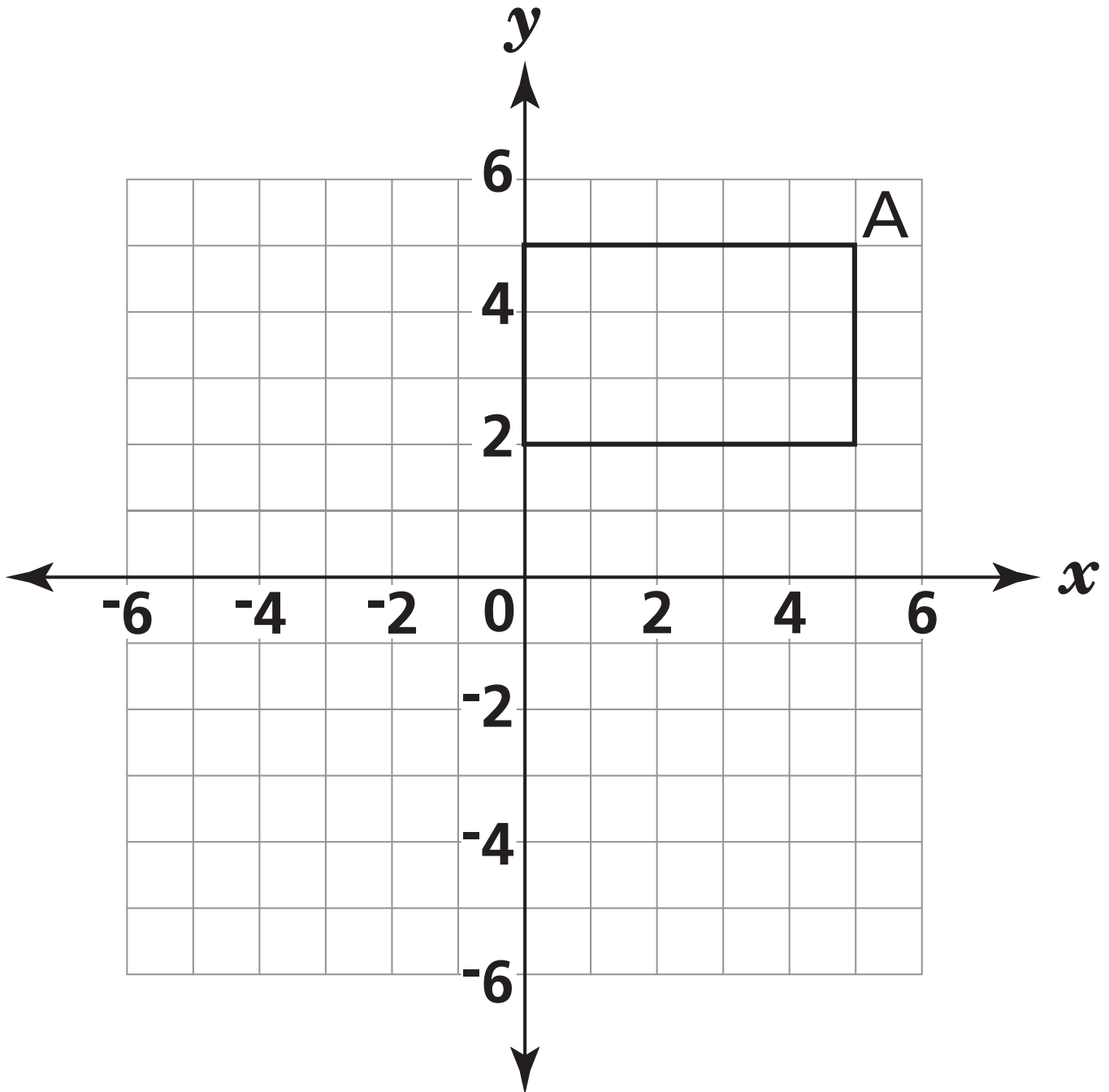
What is the length, in feet, of side m ?

Show your work.

Answer _____ feet

32

Brian drew a rectangle on the grid below. On the same grid, rotate the rectangle **both** 90° and 180° clockwise about the origin. Label point A from the rectangle Brian drew as A' on your 90° rotated figure and as A'' on your 180° rotated figure.



Go On

33

Noel and Renaldo want to rent bikes with two other friends. They have \$150 to spend on bike rentals. The sign below shows the bike rental rates.

BIKE RENTALS

- Rent 1 bike for \$9.75 per hour.

Special Group Rate

- For groups of 4 or more, save \$3.00 per person.

All rates include tax.

Based on the information on the sign, the equation below can be used to determine the number of hours, h , the 4 friends can rent bikes with \$150.

$$4(9.75h - 3) = 150$$

Part A

Noel says they have enough money to rent the bikes for a maximum of 3 hours. Solve the equation for the number of hours, h , in order to determine whether Noel is correct.

Show your work.

Answer _____ hours

Part B

On the lines below, explain whether Noel is correct.

STOP



Grade 8
Mathematics
Book 2
Sample Test 2005

The McGraw-Hill Companies