



# ***New York State Testing Program***

## **Mathematics Test Book 2**

Grade **8**

**March 12–16, 2007**

**Name** \_\_\_\_\_



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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.
- 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.

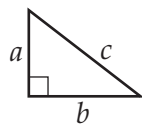


This picture means that you will use your protractor.

## Mathematics Reference Sheet

### FORMULAS

Pythagorean Theorem



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

Simple Interest

$$I = prt$$

Distance Formula

$$d = rt$$

### CONVERSIONS

Temperature Conversions

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

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

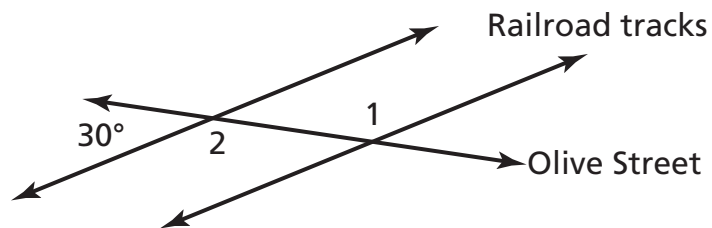
Measurement Conversions

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

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



Olive Street crosses two parallel railroad tracks, as shown below.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

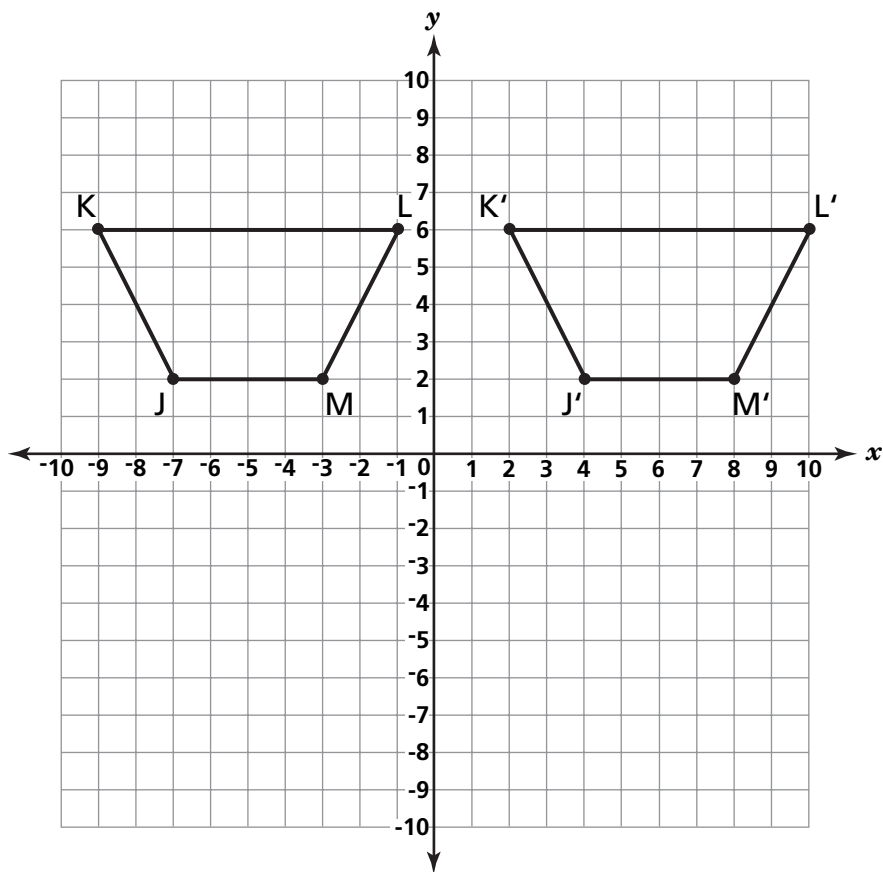
**Show your work.**

**Answer** \_\_\_\_\_ degrees

**Go On**

29

Trapezoid JKLM and its transformation trapezoid J'K'L'M' are plotted on the grid below.



**Part A**

Name the transformation that was applied to trapezoid JKLM to get trapezoid J'K'L'M'.

**Answer** \_\_\_\_\_

**Part B**

On the lines below, explain how you determined what transformation was applied to trapezoid JKLM to get trapezoid J'K'L'M'.

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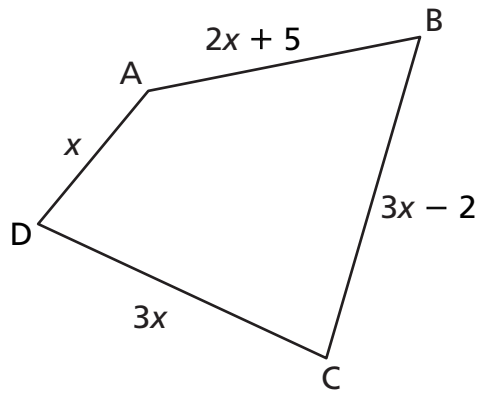
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***Go On***

**30**

In the figure ABCD shown below, the total length of the sides equals 84 inches.



[not drawn to scale]

Find the length of side  $\overline{BC}$ .

**Show your work.**

**Answer** \_\_\_\_\_ inches



**31**

The transportation department recommends increasing highway tolls by 20% to raise money for road repairs. The current highway toll is \$1.50. What will be the **new** toll after the 20% increase?

**Show your work.**

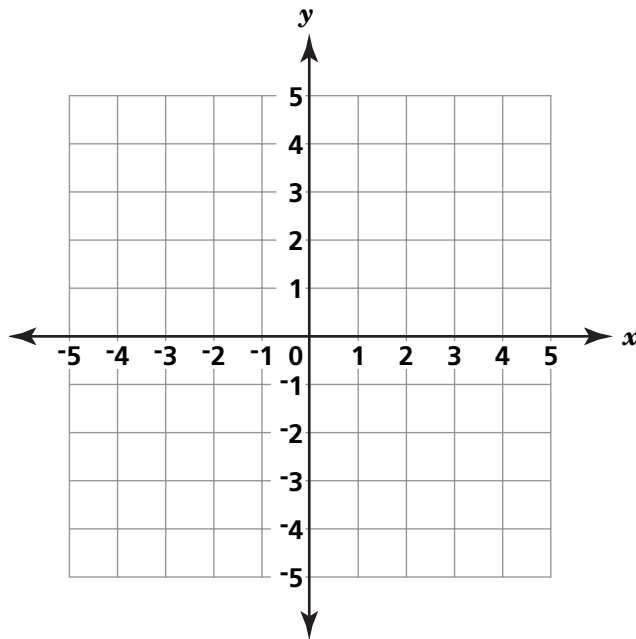
**Answer** \$ \_\_\_\_\_

**Go On**

Complete the table of values for the equation  $y - 3x = 2$ .

| $x$ | $y$ |
|-----|-----|
| -2  |     |
| -1  |     |
| 0   |     |
| 1   |     |

Using the table of values, graph the line of the equation on the coordinate plane below.



**33**

Rashid wrote the sentence below.

Forty-eight is greater than or equal to four plus the product of a certain number,  $x$ , and eleven.

Write Rashid's sentence as an algebraic inequality.

**Answer** \_\_\_\_\_

**STOP**

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Place Student Label Here



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