

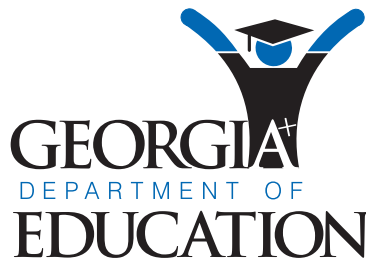


# Georgia CRCT-M

## Sample Items

# Grade 7

## MATHEMATICS



# **Original CRCT**

## **Grade 7 Items** **MATHEMATICS**

# MATHEMATICS

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1. Mary has 10 dolls. This is 7 more than her sister.

The equation below shows the relationship.

$$x + 7 = 10$$

How many dolls does her sister have?

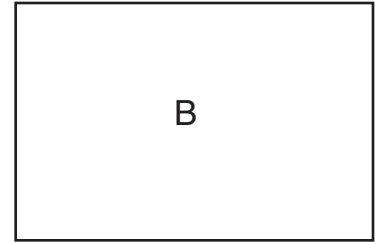
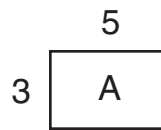
- \* A. 3
  - B. 5
  - C. 17
  - D. 70
2. Parents must pay a \$50 enrollment fee to put their children in summer camp. They also have to pay \$20 for each activity their children participate in during the week.

What does the  $x$  represent in the equation?

$$50 + 20x = 110$$

- A. the enrollment fee
- \* B. the number of weekly activities
- C. the cost of each activity
- D. the total cost of summer camp

3. Rectangle A is similar to rectangle B.



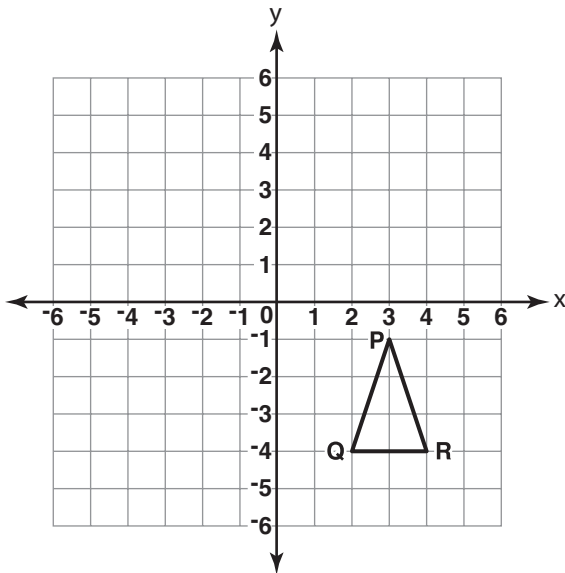
The scale factor between the two rectangles is 6.

What is the area of rectangle B?

- A. 27
- B. 33
- C. 162
- \* D. 540

# MATHEMATICS

4. Look at the triangle below.



The triangle is translated left 4 units then down 2 units. What are the coordinates of the triangle's vertices after translation?

- A. (1, -3), (-1, -6), (1, -6)
- B. (2, -4), (-1, -5), (1, 7)
- \* C. (-1, -3), (-2, -6), (0, -6)
- D. (-3, -2), (-6, -3), (-6, -1)

5. Look at the expression.

$$9a + 4(2b - 6) - 4$$

What is the value of this expression if  $a = 4$  and  $b = 9$ ?

- \* A. 80
- B. 86
- C. 96
- D. 102



# Grade 7 Items

## MATHEMATICS

# MATHEMATICS

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1. Mary has 10 dolls. This is 7 more than her sister.

The equation below shows the relationship.

$$x + 7 = 10$$

How many dolls does her sister have?

- A. 3
- B. 5
- C. 17
- D. 70

**Helpful Hint**

Remember the  
addition property of  
equality.

# MATHEMATICS

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2. Parents must pay a \$50 fee to sign up their children for summer camp. They also pay \$20 for each activity their children participate in during camp.

What does the  $x$  represent in the equation?

$$50 + 20x = 110$$

- A. the fee
- B. the number of activities
- C. the cost of each activity
- D. the total cost of summer camp

### Helpful Hint

Use this table.

Fee	Number of Activities	Total

# MATHEMATICS

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3. Rectangle A is similar to rectangle B.



The **scale factor** between the two rectangles is 6.

What is the **area** of rectangle B?

- A. 27
- B. 33
- C. 162
- D. 540

### Helpful Hint

This is a two-step problem:

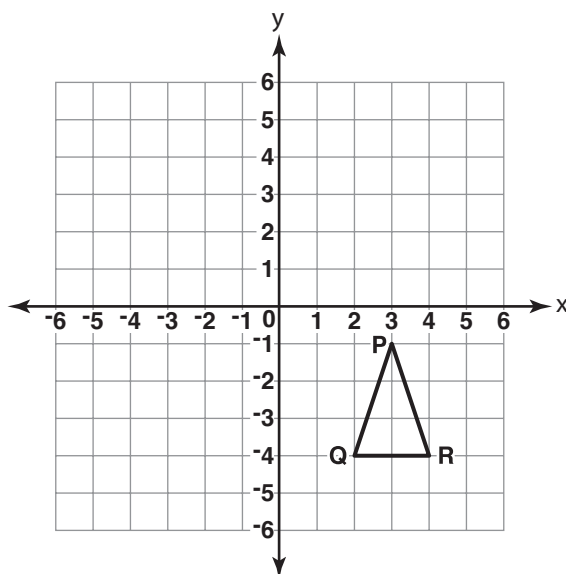
1. Apply the scale factor to rectangle **B** to figure out the length and width of **B**.
2. Now use the formula to calculate area:

$$A = l \times w$$

$$\text{Area} = \text{length} \times \text{width}$$



4. Look at the triangle below.



The triangle is translated left 4 units then down 2 units. What are the coordinates of the triangle's vertices after translation?

- A.  $(1, -3), (-1, -6), (1, -6)$
- B.  $(2, -4), (-1, -5), (1, 7)$
- C.  $(-1, -3), (-2, -6), (0, -6)$
- D.  $(-3, -2), (-6, -3), (-6, -1)$

**Helpful Hint**

1. Draw the triangle translated left 4 units.
2. Then draw the triangle translated down 2 units.
3. The coordinates of the vertices should be in **P, Q, R** order.

5. Look at the expression.

$$3a + 2(2b + 2)$$

What is the value of this expression if  $a = 4$  and  $b = 6$ ?

- A. 32
- B. 34
- C. 38
- D. 40

Item Sequence	Georgia Performance Standard	KEY
1	<b>Domain: Algebra</b> <b>M7A2.</b> Students will understand and apply linear equations in one variable. a. Given a problem, define a variable, write an equation, solve the equation, and interpret the solution.	A
2	<b>Domain: Algebra</b> <b>M7A2.</b> Students will understand and apply linear equations in one variable. a. Given a problem, define a variable, write an equation, solve the equation, and interpret the solution.	B
3	<b>Domain: Geometry</b> <b>M7G3.</b> Students will use the properties of similarity and apply these concepts to geometric figures. b. Understand the relationships among scale factors, length ratios, and area ratios between similar figures. Use scale factors, length ratios, and area ratios to determine side lengths and areas of similar geometric figures.	D
4	<b>Domain: Geometry</b> <b>M7G2.</b> Students will demonstrate understanding of transformations. b. Given a figure in the coordinate plane, determine the coordinates resulting from a translation, dilation, rotation, or reflection.	C
5	<b>Domain: Algebra</b> <b>M7A1.</b> Students will represent and evaluate quantities using algebraic expressions. b. Simplify and evaluate algebraic expressions, using commutative, associative, and distributive properties as appropriate.	D

Item Sequence	Commentary
All	<ul style="list-style-type: none"><li>• The font size was increased on all items.</li><li>• Geometric figures and other graphic images were enlarged.</li><li>• The line spacing between items was increased.</li></ul>
1	A helpful hint was added to remind the student how to solve an equation for an unknown.
2	<ul style="list-style-type: none"><li>• A helpful hint was added to help the student approach the problem and select an answer.</li><li>• The question stem and responses were shortened to reduce cognitive load.</li></ul>
3	<ul style="list-style-type: none"><li>• A helpful hint was added to help the student work through a multi-step problem and apply the provided formula.</li><li>• The key terms were boldfaced to help the student focus on the concept being assessed.</li></ul>
4	<ul style="list-style-type: none"><li>• A helpful hint was added to help the student work through a multi-step problem.</li></ul>
5	The number of terms was reduced and the values of the numbers were lowered.