2.2

Translations

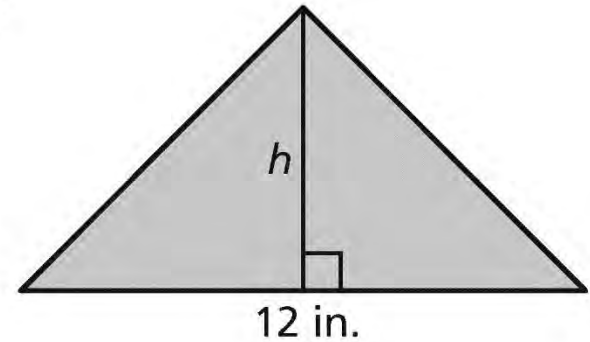# Warm Up - Review

Solve.

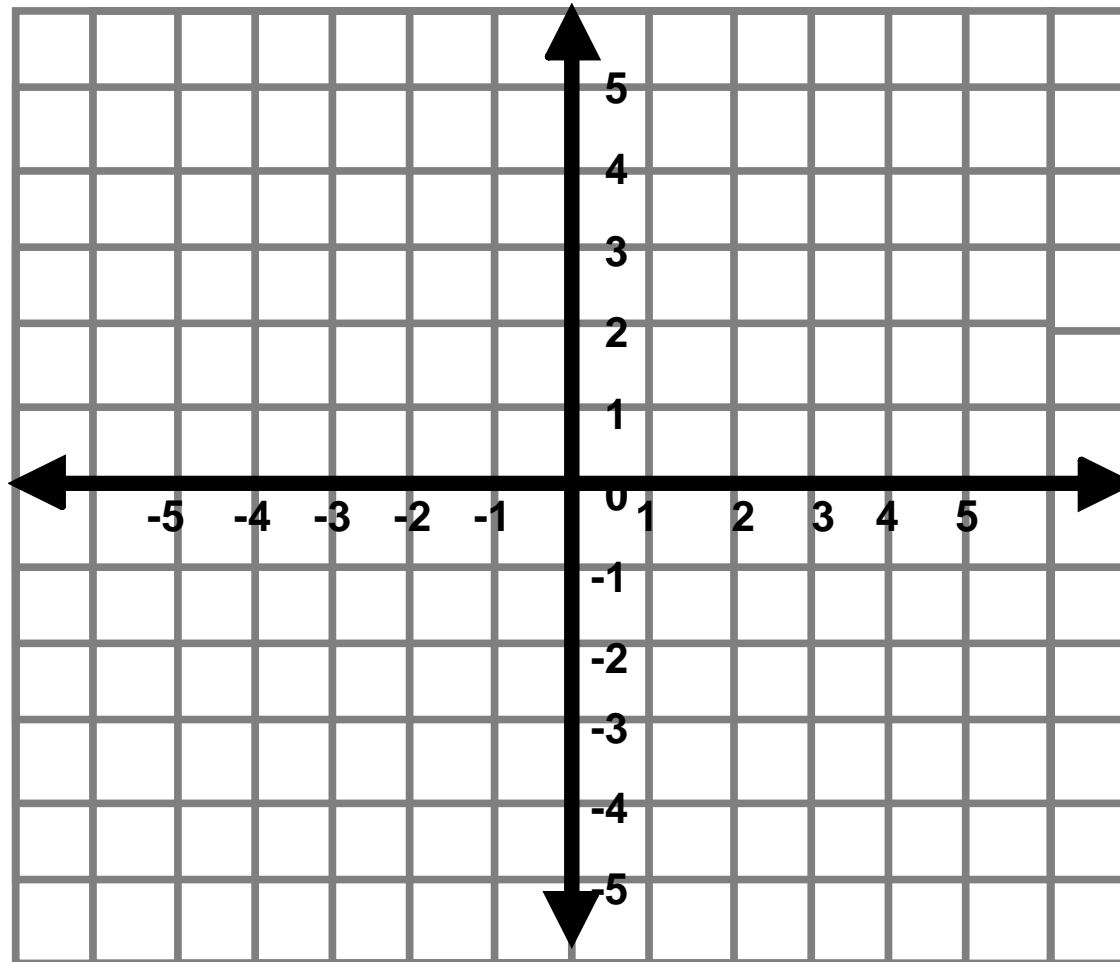**1.** $x - 7 = -13$

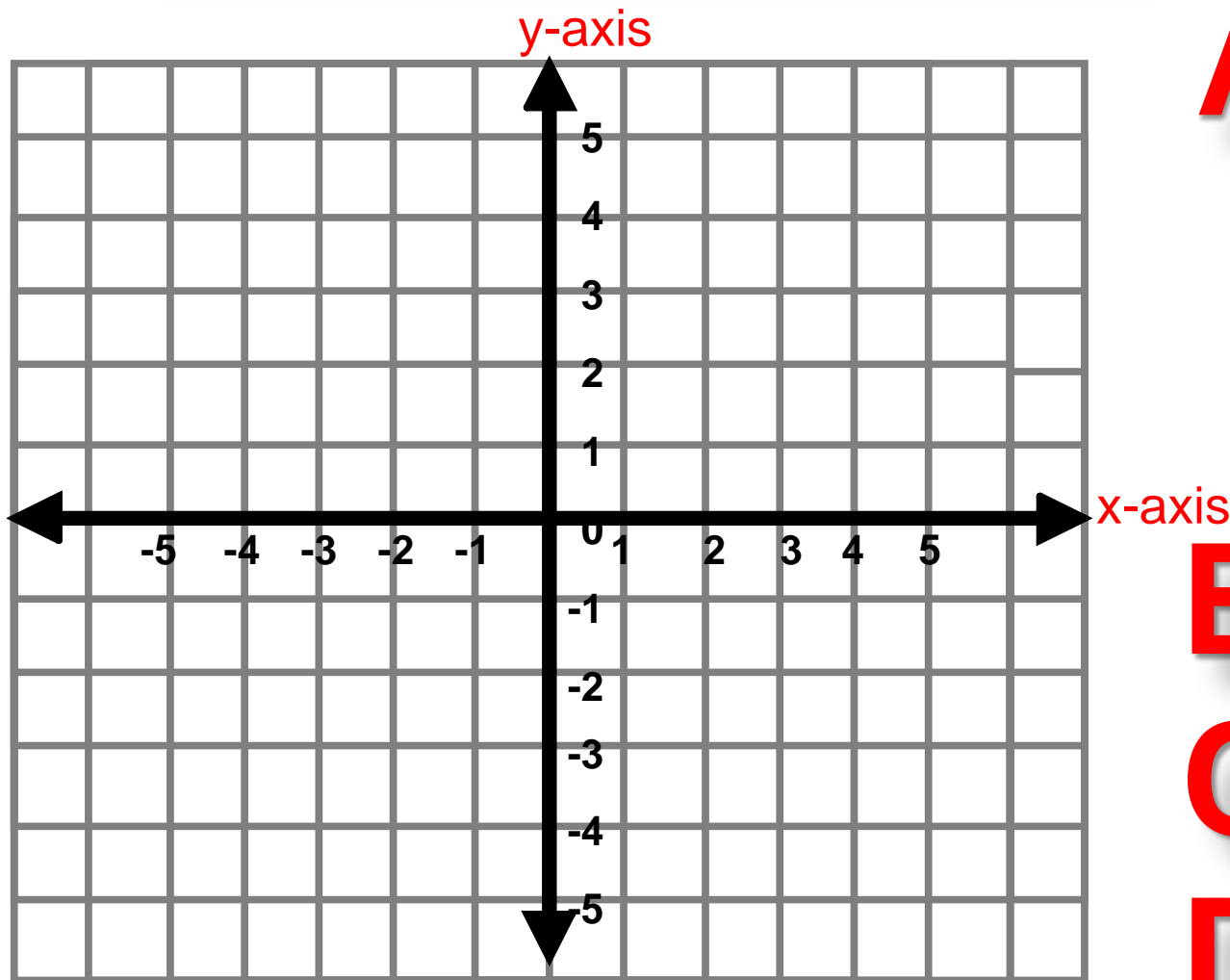**2.** $15 - 3c = 3$

Warm Up - Review

4. **a.** Write the formula for the area of a triangle.

    b. Solve the formula for h.

    c. The area of a triangle is 36 square inches.
        Use the new formula to find the height of
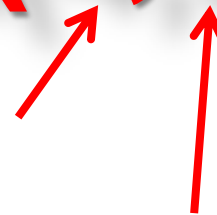   the triangle in inches   .
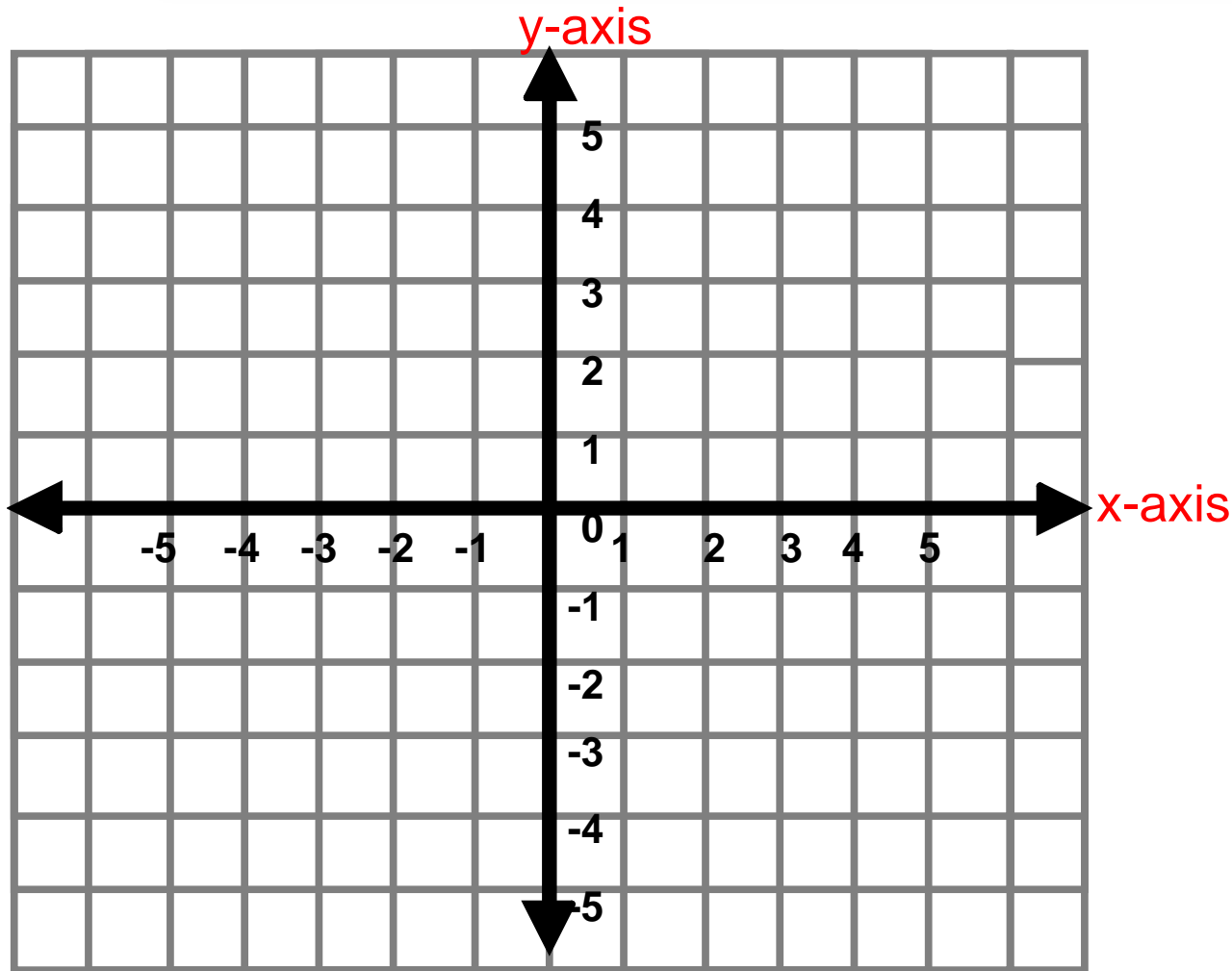
h

12 in.

COORDINATE PLANE

COORDINATES

y-axis

x-axis

5
4
3
2
1
0
-1
-2
-3
-4
-5

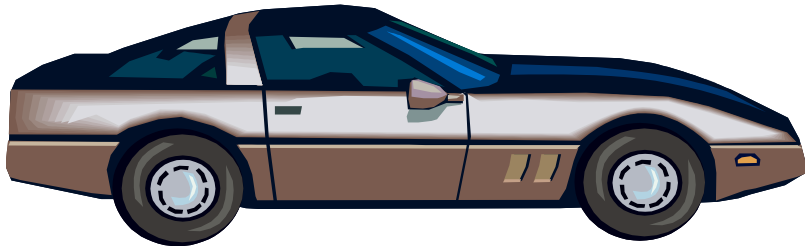-5 -4 -3 -2 -1   1   2   3   4   5

A(4,3)

B(-5,1)

C(2,-4)

D(3,0)

PLOTTING POINTS

A(5,2)
B(-3,-4)
C(-1,5)
D(3,-5)
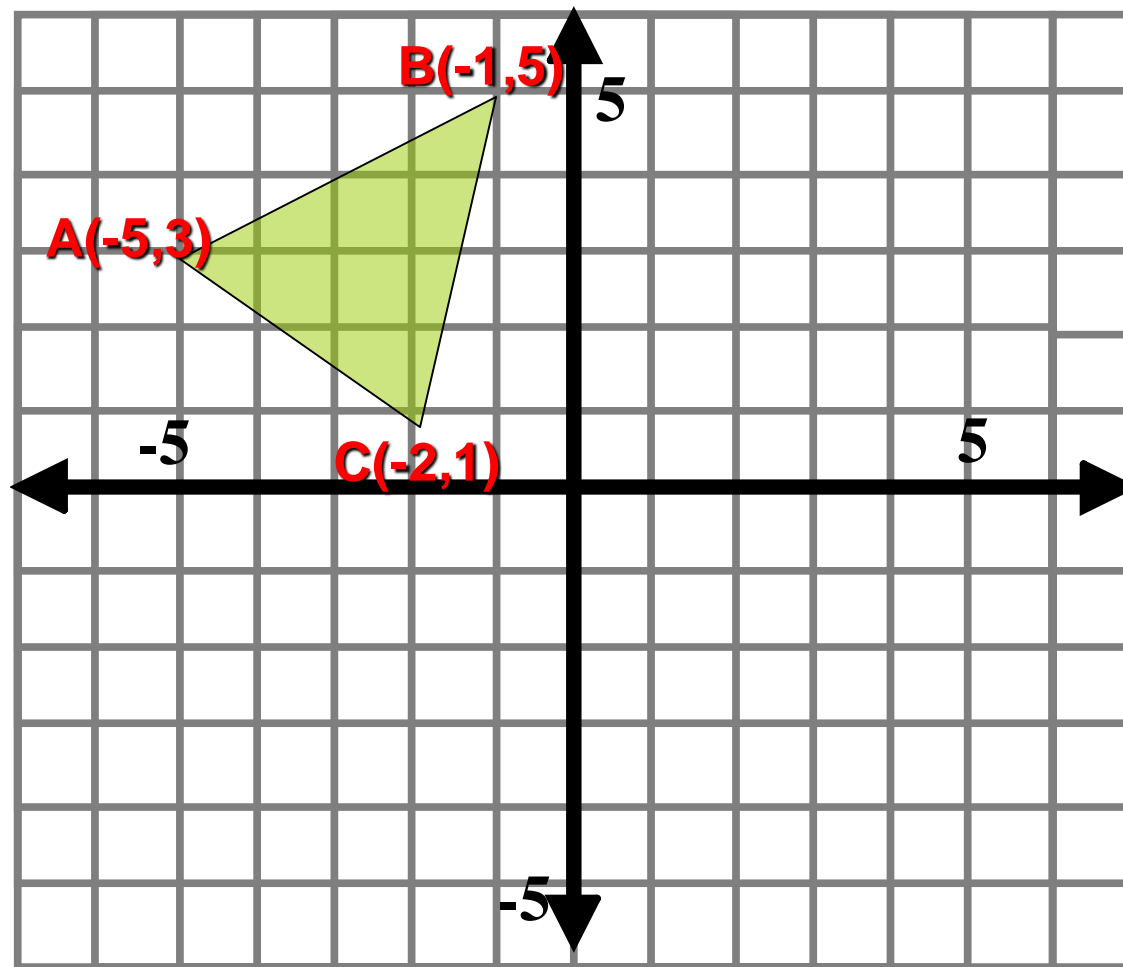E(4,6)
F(0,0)
G(4,0)
H(0,-3)

Vocabulary

Translation

Sliding a figure from one place to another
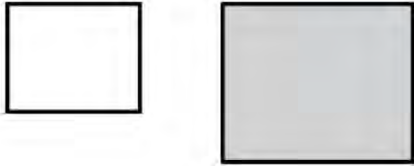
Translations on a Coordinate Plane

Rule:

$(x,y) \rightarrow (x+6, y-5)$
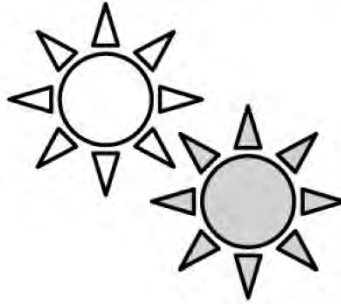
$(x,y) \rightarrow (x-8, y-2)$

Graph labels:
B(-1,5)
A(-5,3)
C(-2,1)
5
-5
5
-5

<u>Practice</u>

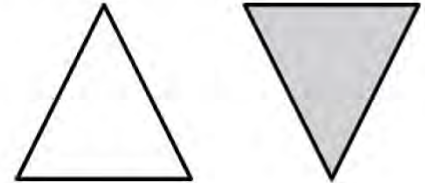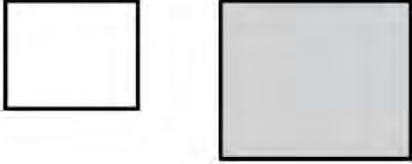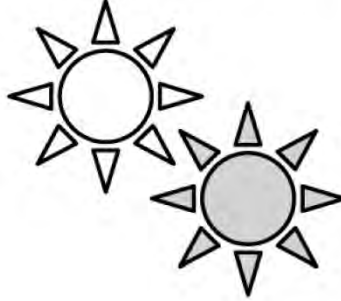**Tell whether the shaded figure is a translation of the nonshaded figure.**

1.

2.

3.

Practice

Tell whether the shaded figure is a translation of the nonshaded figure.
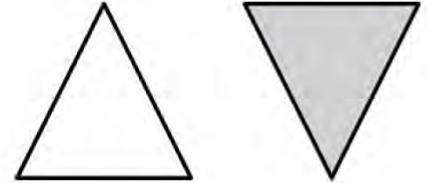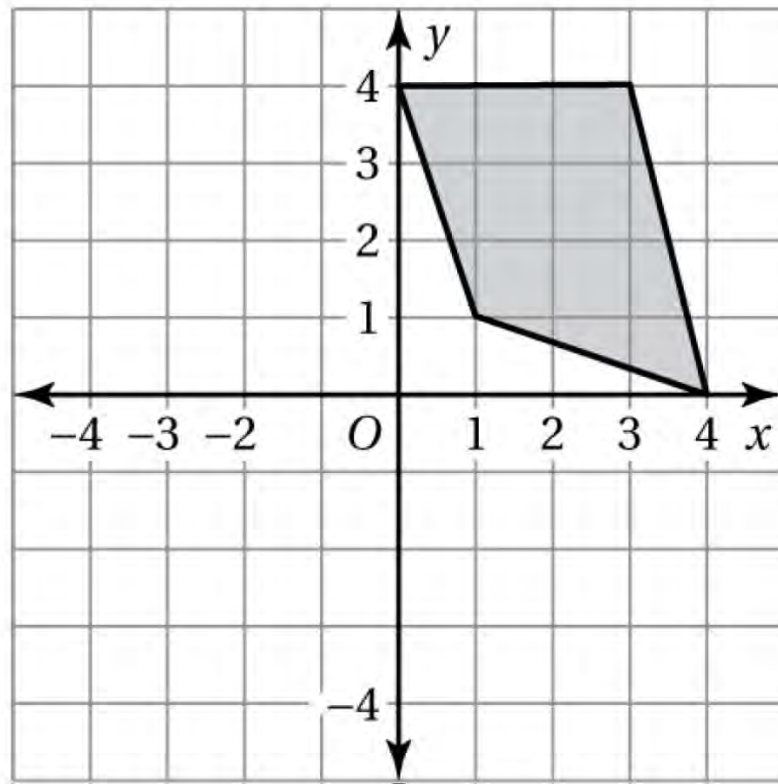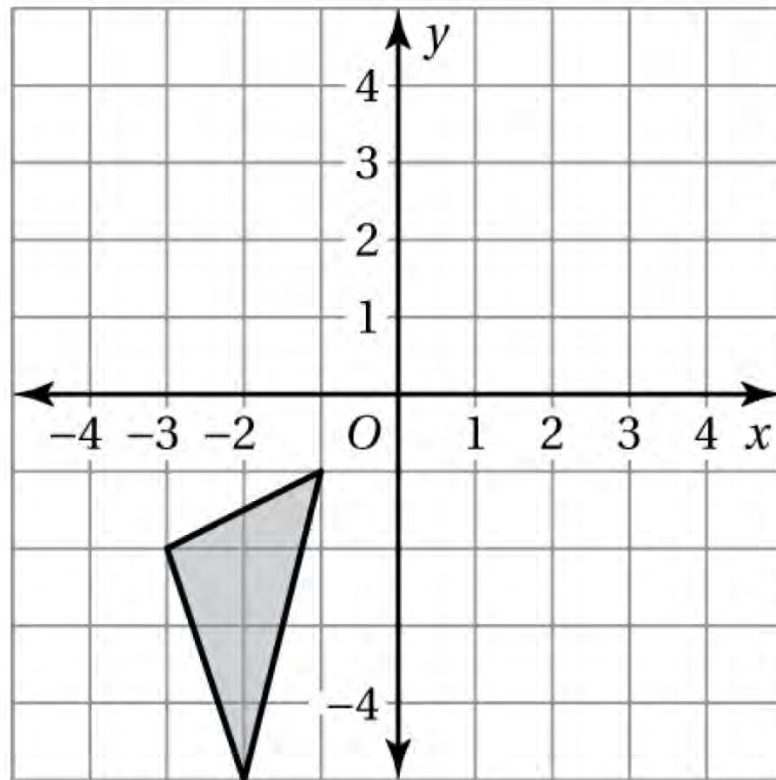
1.

2.

3.

Practice

4. Translate the figure 4 units left and 1 unit down. What are the coordinates of the image?
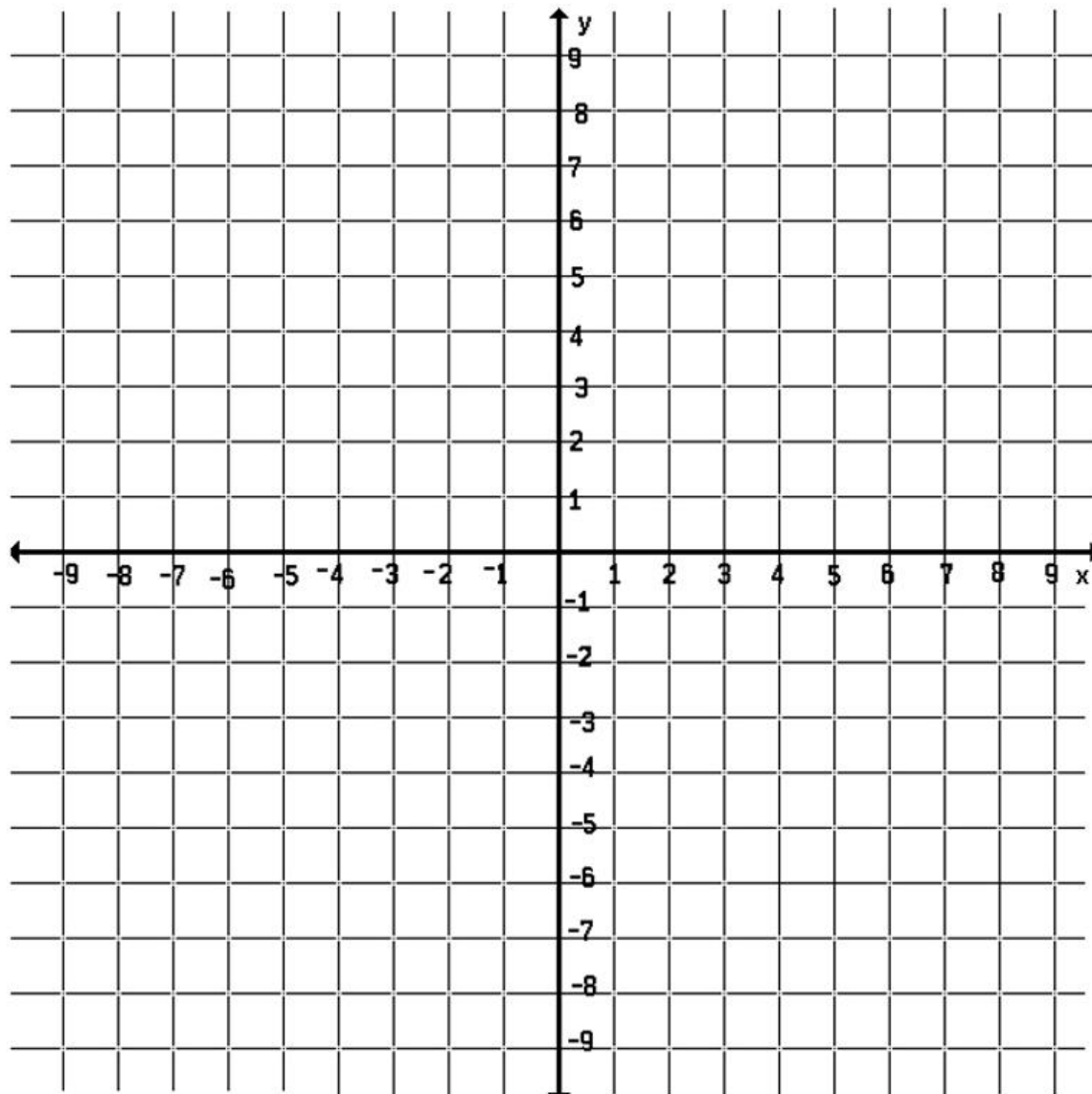
Practice

5. Translate the triangle 5 units right and 4 units up. What are the coordinates of the image?

Practice

The vertices of a triangle are $A(-2, 0)$, $B(0, 3)$, **and** $C(2, 2)$. **Draw the figure and its image after the translation.**

6. 4 units down

Practice

The vertices of a triangle are $A(-2, 0)$, $B(0, 3)$, **and** $C(2, 2)$. **Draw the figure and its image after the translation.**

7. 2 units right and 1 unit up