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### 2.2 Practice A

Tell whether the right figure is a translation of the left figure.
1.

2.


3. Translate the triangle 3 units left and 2 units up. What are the coordinates of the image?


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.
4. 4 units down
5. 2 units right and 1 unit up
6. Describe the translation from the solid line figure to the dashed line figure.


7. In Exercise 6, describe the translation from the dashed line figure to the solid line figure.

Name $\qquad$
$\qquad$

### 2.3 Practice A

Tell whether one figure is a reflection of the other figure.
1.

2.

Draw the figure and its reflection in the $x$-axis. Identify the coordinates of the image.

3. $E(0,2), F(3,1), G(4,3)$
4. $H(-3,2), I(-1,5), J(2,1)$
7. What does the word MOM spell when it is reflected in a horizontal line?

The coordinates of a point and its image are given. Is the reflection in the $x$-axis or $y$-axis?
8. $(-5,2) \rightarrow(5,2)$
9. $(4,3) \rightarrow(4,-3)$
10. Translate the triangle 2 units left and 1 unit up. Then reflect the image in the $x$-axis. Graph the resulting triangle.

11. A figure is in Quadrant IV. The figure is reflected in the $y$-axis. In which quadrant is the image?

