

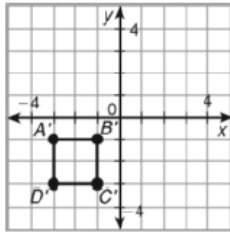
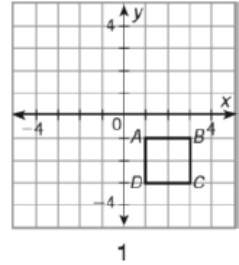
LESSON
1-7

Practice B

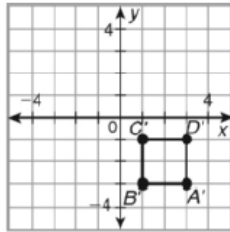
Transformations in the Coordinate Plane

Use the figure for Exercises 1–3.

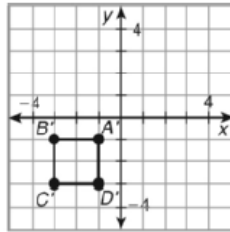
The figure in the plane at right shows the preimage in the transformation $ABCD \rightarrow A'B'C'D'$. Match the number of the image (below) with the name of the correct transformation.



1



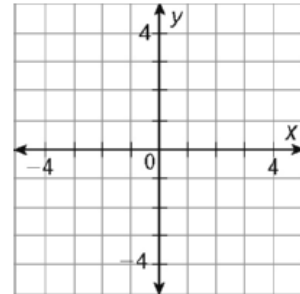
2



3

1. rotation _____ 2. translation _____ 3. reflection _____

4. A figure has vertices at $D(-2, 1)$, $E(-3, 3)$, and $F(0, 3)$. After a transformation, the image of the figure has vertices at $D'(-1, -2)$, $E'(-3, -3)$, and $F'(-3, 0)$. Draw the preimage and the image. Then identify the transformation.

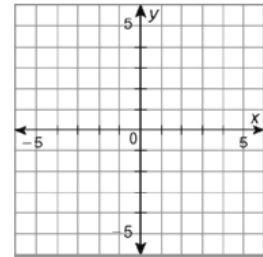
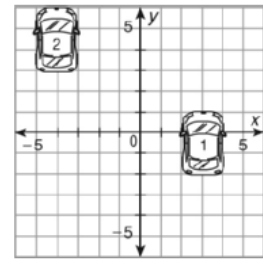


5. A figure has vertices at $G(0, 0)$, $H(-1, -2)$, $I(-1.5, 0)$, and $J(-2.5, 2)$. Find the coordinates for the image of $GHIJ$ after the translation $(x, y) \rightarrow (x - 2.5, y + 4)$.

Use the figure for Exercise 6.

6. A parking garage attendant will make the most money when the maximum number of cars fits in the parking garage. To fit one more car in, the attendant moves a car from position 1 to position 2. Write a rule for this translation.

7. A figure has vertices at $X(-1, 1)$, $Y(-2, 3)$, and $Z(0, 4)$. Draw the image of XYZ after the translation $(x, y) \rightarrow (x - 2, y)$ and a 180° rotation around X .



Practice B

1. 2

2. 1

3. 3

4. rotation

5. $G'(-2.5, 4)$, $H'(-3.5, 2)$, $I'(-4, 4)$, $J'(-5, 6)$

6. $(x, y) \rightarrow (x - 7, y + 5)$

7.

