Name _____ Class _____ Date _____

Practice 9-1

Translations

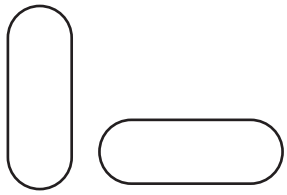
State whether each transformation appears to be an isometry. Explain.

1. _____

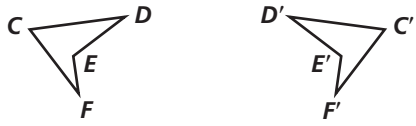
_____

2. _____

_____



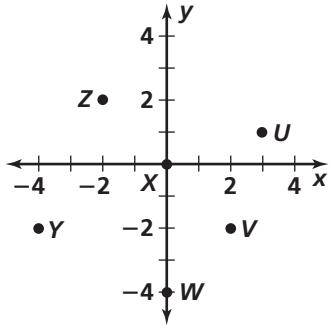
3. In the diagram, $C'D'E'F'$ is the image of $CDEF$.



a. Name the images of $\angle C$ _____ and $\angle F$. _____

b. List the pairs of corresponding sides. _____

Find the rule that describes the given translation.



4. $Z \rightarrow Y$ _____

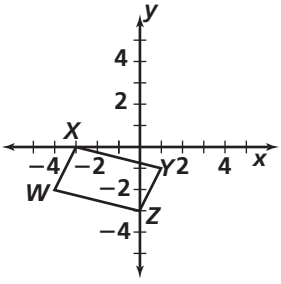
5. $Y \rightarrow W$ _____

6. $W \rightarrow V$ _____

Find the image of each figure under the given translation.

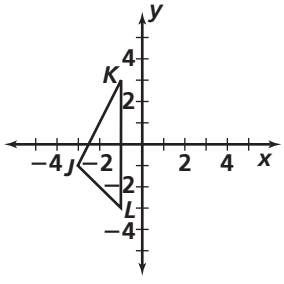
7. translation
$(x, y) \rightarrow (x + 2, y + 4)$

_____



8. translation
$(x, y) \rightarrow (x - 2, y + 1)$

_____



Find a single translation that has the same effect as each composition of translations.

9. $(x, y) \rightarrow (x + 4, y - 8)$ followed by $(x, y) \rightarrow (x + 9, y - 5)$ _____

10. $(x, y) \rightarrow (x + 1, y + 2)$ followed by $(x, y) \rightarrow (x + 2, y + 1)$ _____

11. $\triangle PNQ$ has vertices $P(2, 5)$, $N(-3, -1)$, and $Q(4, 0)$.

a. Determine the image of P under the translation $(x, y) \rightarrow (x - 5, y - 6)$. _____

b. Use matrices to find the image of $\triangle PNQ$ under the translation $(x, y) \rightarrow (x - 2, y + 3)$.

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