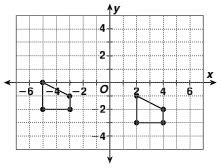
LESSON 8-10

Practice A

Translations, Reflections, and Rotations

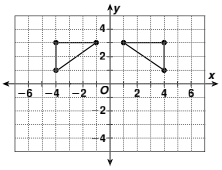
Identify the transformation. Choose the letter of the best answer.

1.



Ⓐ translation
B reflection
C rotation

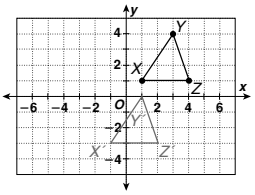
2.



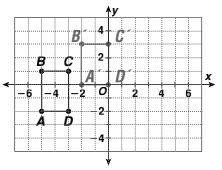
A translation
Ⓑ reflection
C rotation

Graph each translation.

3. 2 units to the left and 4 units down

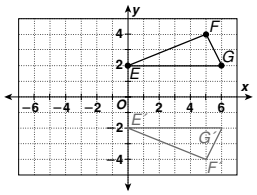


4. 3 units to the right and 2 units up

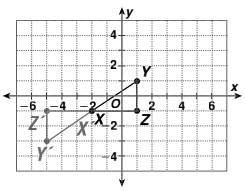


Follow the directions to graph each transformation.

5. Reflect $\triangle EFG$ across the *x*-axis.



6. Rotate $\triangle XYZ$ 180° about the vertex *X*.



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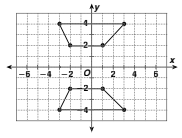
LESSON 8-10

Practice B

Translations, Reflections, and Rotations

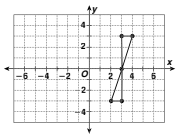
Identify each type of transformation.

1.



reflection

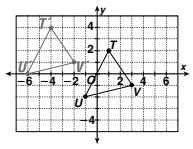
2.



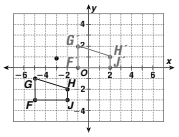
rotation

Graph each translation.

3. 5 units to the left and 2 units up

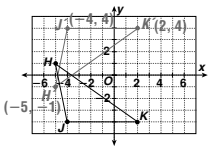


4. 4 units to the right and 3 units up

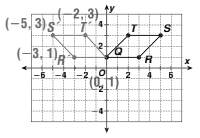


Graph the reflection of each figure across the indicated axis. Write the coordinates of the vertices of the image.

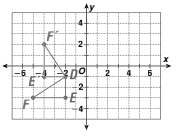
5. *x*-axis



6. *y*-axis



7. Triangle *DEF* has vertices at *D*(−2, −1), *E*(−2, −3), and *F*(−5, −3). Rotate $\triangle DEF$ 90° clockwise about the vertex *D*.



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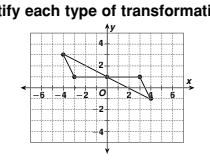
LESSON 8-10

Practice C

Translations, Reflections, and Rotations

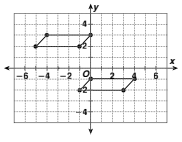
Identify each type of transformation.

1.



rotation

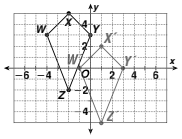
2.



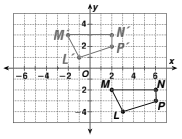
translation

Graph each translation.

3. 3 units to the right and 3 units down

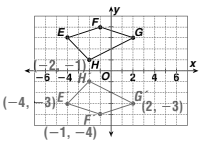


4. 4 units to the left and 5 units up

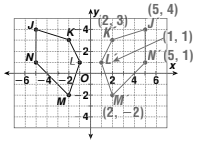


Graph the reflection of each figure across the indicated axis. Write the coordinates of the vertices of the image.

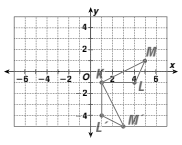
5. *x*-axis



6. *y*-axis



7. Triangle *KLM* has vertices at *K*(1, −1), *L*(4, −1), and *M*(5, 1). Rotate $\triangle KLM$ 270° counterclockwise about the vertex *K*.



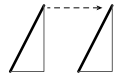
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LESSON 8-10

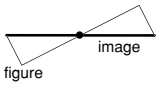
Reteach

Translations, Reflections, and Rotations

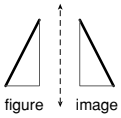
A **translation** is a *slide* to a new position.



A **rotation** is a *turn* of the figure.

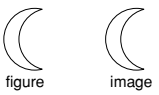


A **reflection** is a *flip* of the figure.



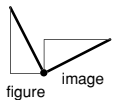
Identify the type of transformation.

1.



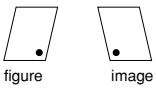
translation

2.



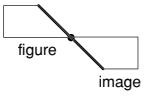
rotation

3.



reflection

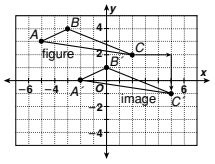
4.



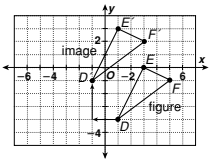
rotation

- You can translate figures in the coordinate plane.

$\triangle ABC$ is translated 3 units right and 3 units down.



$\triangle DEF$ is translated 2 units left and 3 units up.



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