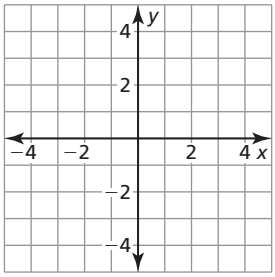
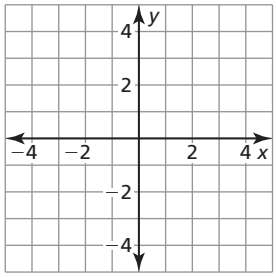
Name_____ Date _____

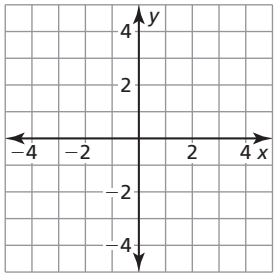
Chapter 11 Test A

Graph $\triangle ABC$ with vertices $A(1, 2)$, $B(-2, 0)$, and $C(-2, 3)$ and its image after the translation.

1. $(x, y) \rightarrow (x + 1, y)$ **2.** $(x, y) \rightarrow (x - 2, y)$ **3.** $(x, y) \rightarrow (x + 3, y - 2)$

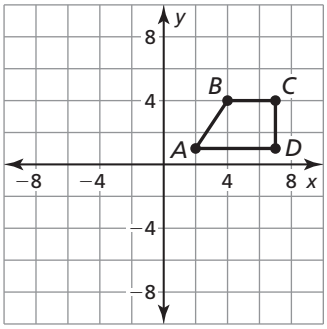




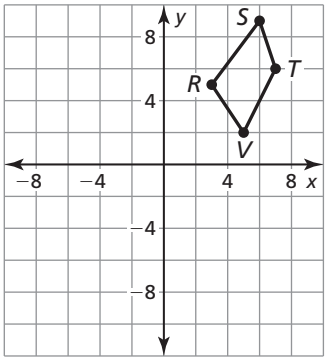


Graph the polygon's image after a reflection in the given line.

4. $x = 2$

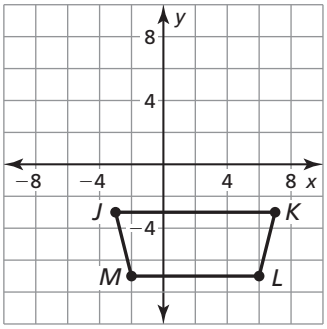


5. $y = -1$



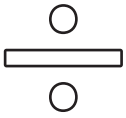
6. Identify the line symmetry (if any) of the word CHECKBOOK?

7. Trapezoid $JKLM$ is rotated 180° clockwise about the origin. What are the new coordinates of $J'K'L'M'$?



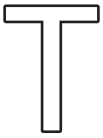
Determine whether the figure has rotational symmetry. If so, describe any rotations that map the figure onto itself.

8.



9.

10.



Answers

1. See left.
2. See left.
3. See left.
4. See left.
5. See left.
6. _____
7. _____
8. _____
9. _____
10. _____

Name _____ Date _____

Chapter 11 Test A (continued)

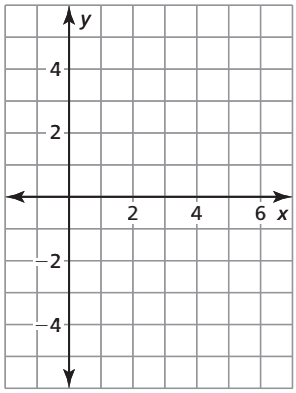
Determine whether the polygons with the given verticies are congruent. Use transformations to explain your reasoining.

11. $A(8, -6), B(1, -3), C(1, -9)$ and $D(-7, 1), E(0, -2), F(0, 4)$

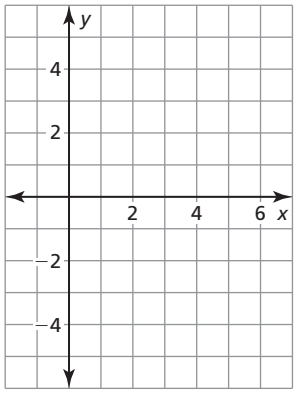
12. $J(-4, 1), K(-10, 3), L(-10, 9), M(-4, 7)$, and $N(4, 2), O(2, -8), P(-4, -8), Q(-2, 2)$

The endpoints of $\overline{AB}$ are $A(4, 5)$ and $B(6, -3)$. Translate $\overline{AB}$ using the given vector. Graph $\overline{AB}$ and its image.

13. $\langle -2, -3 \rangle$

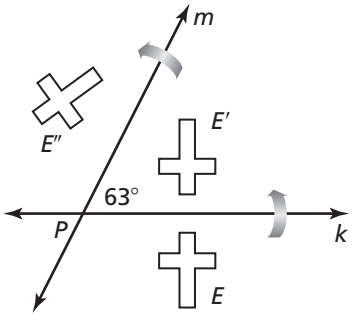


14. $\langle 0, -2 \rangle$



15. $\triangle ABC$ has $m\angle A = 40°$ and $m\angle B = 60°$. $\triangle DEF$ has $m\angle D = 40°$ and $m\angle F = 80°$. Your partner concludes that the triangles are not similar. Do you agree or disagree? Why?

16. In the diagram, the figure is reflected in line k. The image is then reflected in line m. Describe a single transformation that maps E to E''.



Answers

11. _____

_____

_____

_____

_____

12. _____

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_____

_____

13. See left.

14. See left.

15. _____

_____

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_____

16. _____

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