

9.1 Independent Practice

CA CC 8.G.1, 8.G.3

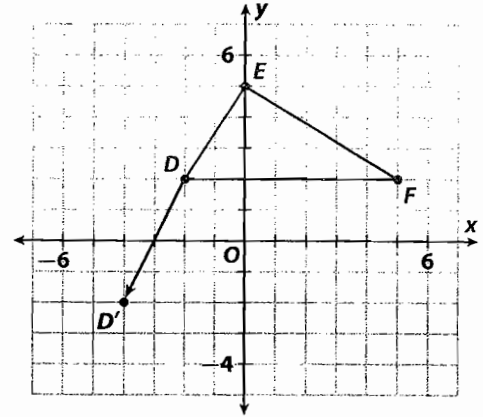


Personal Math Trainer

Online Practice and Help

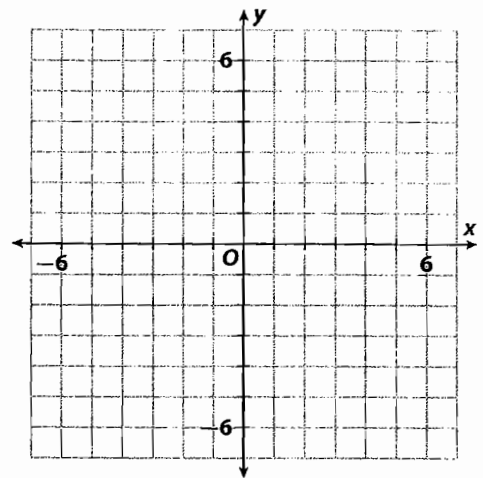
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7. The figure shows triangle DEF .
- Graph the image of the triangle after the translation that maps point D to point D' .
 - How would you describe the translation?



- How does the image of triangle DEF compare with the preimage?

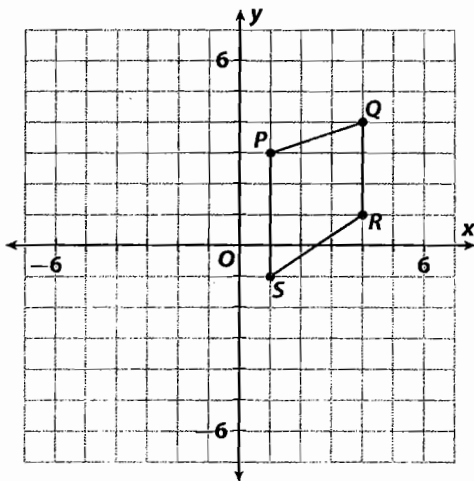
8. a. Graph quadrilateral $KLMN$ with vertices $K(-3, 2)$, $L(2, 2)$, $M(0, -3)$, and $N(-4, 0)$ on the coordinate grid.
- On the same coordinate grid, graph the image of quadrilateral $KLMN$ after a translation of 3 units to the right and 4 units up.
 - Which side of the image is congruent to side \overline{LM} ?



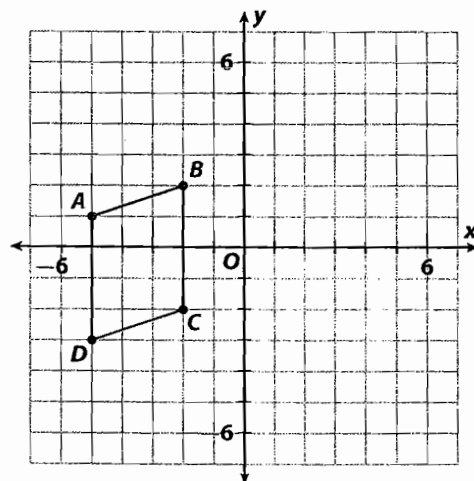
Name three other pairs of congruent sides.

Draw the image of the figure after each translation.

9. 4 units left and 2 units down

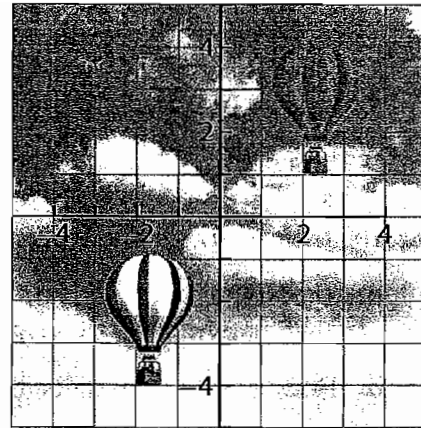


10. 5 units right and 3 units up



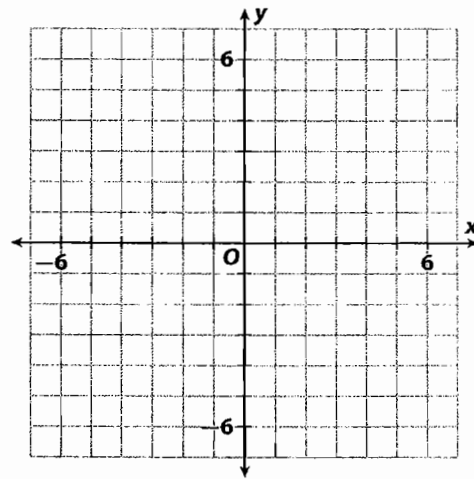
11. The figure shows the ascent of a hot air balloon. How would you describe the translation?

12. **Critical Thinking** Is it possible that the orientation of a figure could change after it is translated? Explain.

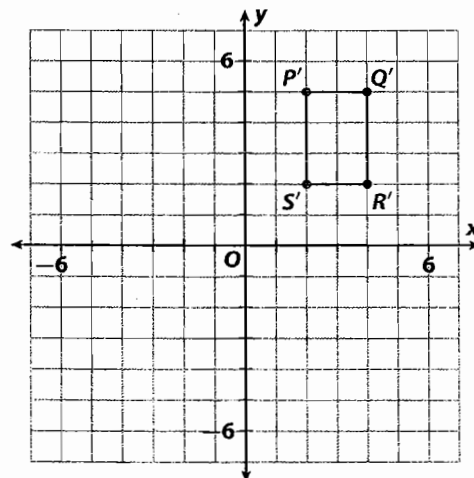


H.O.T. FOCUS ON HIGHER ORDER THINKING

13. a. **Multistep** Graph triangle XYZ with vertices $X(-2, -5)$, $Y(2, -2)$, and $Z(4, -4)$ on the coordinate grid.
- b. On the same coordinate grid, graph and label triangle $X'Y'Z'$, the image of triangle XYZ after a translation of 3 units to the left and 6 units up.
- c. Now graph and label triangle $X''Y''Z''$, the image of triangle $X'Y'Z'$ after a translation of 1 unit to the left and 2 units down.
- d. **Analyze Relationships** How would you describe the translation that maps triangle XYZ onto triangle $X''Y''Z''$?



14. **Critical Thinking** The figure shows rectangle $P'Q'R'S'$, the image of rectangle $PQRS$ after a translation of 5 units to the right and 7 units up. Graph and label the preimage $PQRS$.



15. **Communicate Mathematical Ideas** Explain why the image of a figure after a translation is congruent to its preimage.
