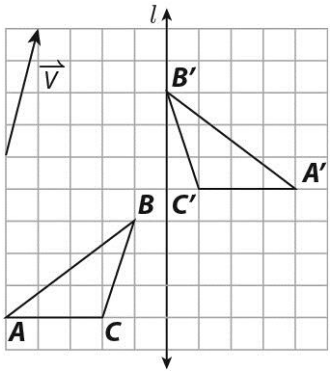
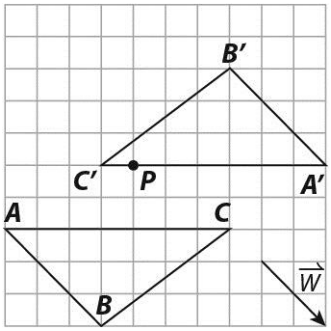
LESSON 18-1

Practice and Problem Solving: A/B

1. 

2. 

3. Possible answer: Since *ABCD* is in Quadrant II, a reflection across the *y*-axis maps the rectangle to Quadrant I.

4. Possible answer: A rotation of 90° clockwise maps a figure in Quadrant I to Quadrant IV. The rectangle is rotated 90° so that it is wider than it is tall.

5. Possible answer: A translation along the vector $\langle 6, 2 \rangle$ moves the figure 6 units left and 2 units up. This moves the figure into Quadrant III, close to the *x*-axis. It remains oriented so that it is wider than it is tall.

LESSON 18-2

Practice and Problem Solving: A/B

1. Congruent; Possible answer: there is a rigid motion (a translation to the right and down) that maps one figure onto the other.

2. Not congruent; Possible answer: the figures are different sizes, so there is no rigid motion that maps one figure onto the other.

3. $\triangle ABC$ maps onto $\triangle DEF$

   Translation: $(x, y) \rightarrow (x - 1, y - 5)$

   Reflection: $(x, y) \rightarrow (-x, y)$

4. Figure *ABCDEFGH* maps onto figure *MNPQRSTV*

   Rotation: $(x, y) \rightarrow (-y, x)$

   Translation: $(x, y) \rightarrow (x + 6, y)$

5. Yes

6. Yes

7. No

8. No

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LESSON 18-3

Practice and Problem Solving: A/B

1. $\angle K \cong \angle G$, $\angle L \cong \angle H$, $\angle M \cong \angle I$;
   $\overline{KL} \cong \overline{GH}$, $\overline{LM} \cong \overline{HI}$, $\overline{KM} \cong \overline{GI}$
2. $\angle W \cong \angle D$, $\angle X \cong \angle E$, $\angle Y \cong \angle F$,
   $\angle Z \cong \angle G$, $\overline{WX} \cong \overline{DE}$, $\overline{XY} \cong \overline{EF}$,
   $\overline{YZ} \cong \overline{FG}$, $\overline{WZ} \cong \overline{DG}$
3. 0.2
4. 25
5. 5
6. 40.5
7.

Strategies	Reasons
1. quadrilateral $MNPQ \cong$ quadrilateral $RSTU$	1. Given
2. $\overline{MN} \cong \overline{PQ}$	2. Given
3. $\overline{PQ} \cong \overline{TU}$	3. Corresponding parts of congruent figures are congruent.
4. $\overline{MN} \cong \overline{TU}$	4. Transitive Property of Congruence

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