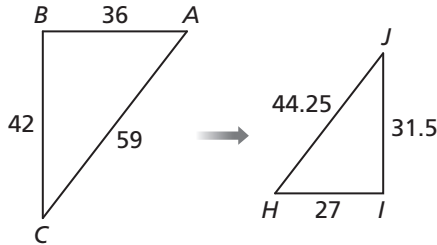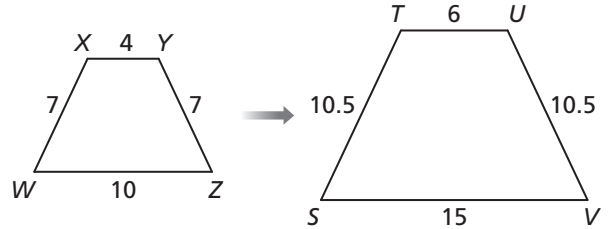Name_____ Date _____

8.1 Practice B

In Exercises 1 and 2, find the scale factor. Then list all pairs of congruent angles and write the ratios of the corresponding side lengths in a statement of proportionality.
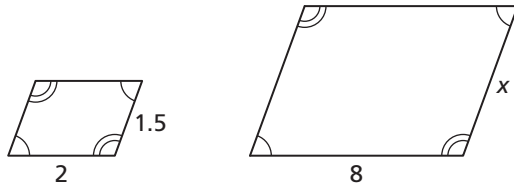
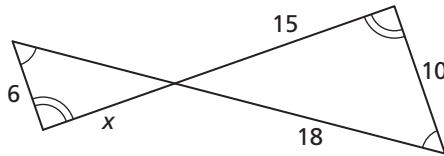**1.** $\triangle ABC \sim \triangle HIJ$

2. $WXYZ \sim STUV$

In Exercises 3 and 4, the polygons are similar. Find the value of *x*.

3.

4.

In Exercises 5 and 6, the figures are similar. Find the missing corresponding side length.

5. Figure A has a perimeter of 60 inches and one of the side lengths is 5 inches. Figure B has a perimeter of 84 inches.

6. Figure A has an area of 4928 square feet and one of the side lengths is 88 feet. Figure B has an area of 77 square feet.

7. In the diagram, $\triangle ABC \sim \triangle ADE$.

   a. Find the scale factor from $\triangle ABC$ to $\triangle ADE$.

   b. Find the value of *x*.

   c. Find $m\angle ABC$.

   d. The perimeter of $\triangle ABC$ is about 42.4 units. Find the perimeter of the $\triangle ADE$.

   e. The area of $\triangle ABC$ is about 71.75 square units. Find the area of the $\triangle ADE$.

   f. Is $\overline{BC} \parallel \overline{DE}$? Explain your reasoning.