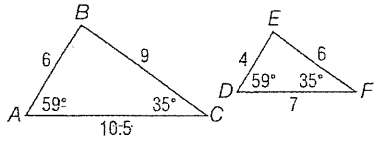
NAME _____ DATE _____ PERIOD _____

7-2 Skills Practice

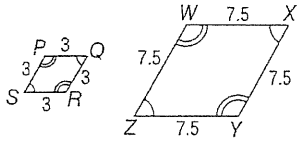
Similar Polygons

Determine whether each pair of figures is similar. If so, write the similarity statement and scale factor. If not, explain your reasoning.

1.

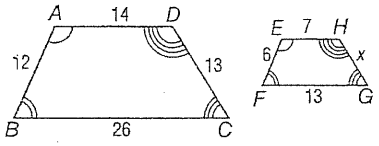


2.

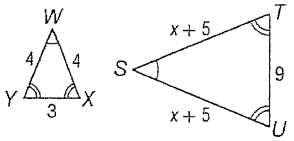


Each pair of polygons is similar. Find the value of x.

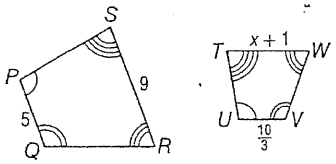
3.



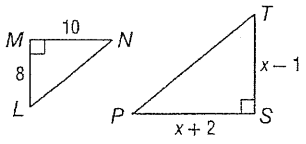
4.



5.



6.



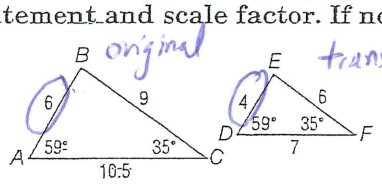
NAME Key DATE _____ PERIOD _____

7-2 Skills Practice

Similar Polygons

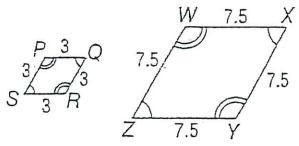
$k = \frac{\text{transformed}}{\text{original}}$

Determine whether each pair of figures is similar. If so, write the similarity statement and scale factor. If not, explain your reasoning.

1. 

$\triangle ABC \sim \triangle DEF$

$\frac{4}{6} = \frac{6}{9} = \frac{7}{10.5} \rightarrow$ **$k = \frac{2}{3}$**

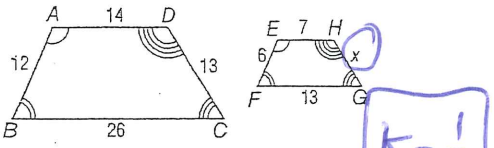
2. 

$PQRS \sim WXYZ$

$\frac{7.5}{3} =$ **$k = \frac{5}{2}$ or 2.5**

Each pair of polygons is similar. Find the value of x.

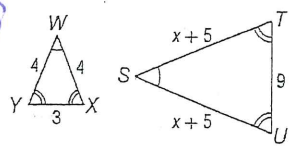
a) b) find scale factor k

3. 

$\frac{6}{12} = \frac{x}{13}$ $\quad \frac{1}{2} = \frac{x}{13}$ **$k = \frac{1}{2}$**

$2x = 13$

$x = 6.5$

4. 

$\frac{9}{3} = \frac{x+5}{4}$

$\frac{3}{1} = \frac{x+5}{4}$

$1(x+5) = 3(4)$

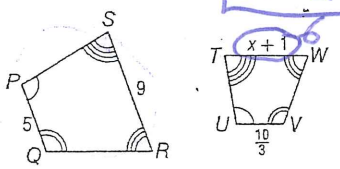
$x + 5 = 12$

$x = 7$

$k = \frac{9}{3}$

$k = \frac{3}{1}$

$k = 3$

5. 

$\frac{9}{x+1} = \frac{5}{10/3}$

$5(x+1) = 9(\frac{10}{3})$

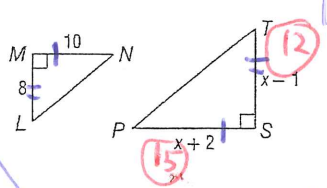
$5x + 5 = 30$

$-5 \quad -5$

$5x = 25$

$x = 5$

$k = \frac{6}{9}$ or **$\frac{2}{3}$**

6. 

$\frac{x+2}{10} = \frac{x-1}{8}$

$8(x+2) = 10(x-1)$

$8x + 16 = 10x - 10$

$-8x \quad -8x$

$16 = 2x - 10$

$26 = 2x$

$13 = x$

$k = \frac{12}{8} = \frac{3}{2}$

$k = 1.5$