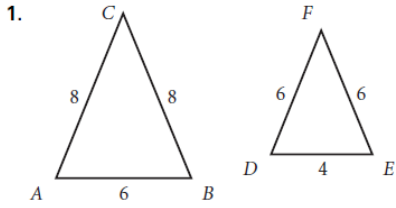
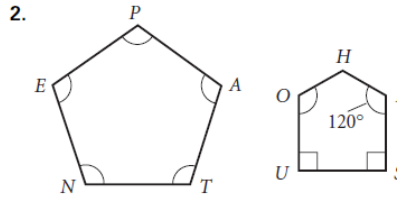
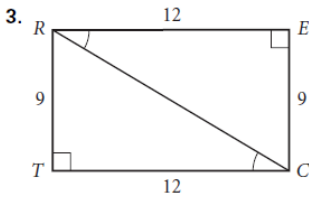


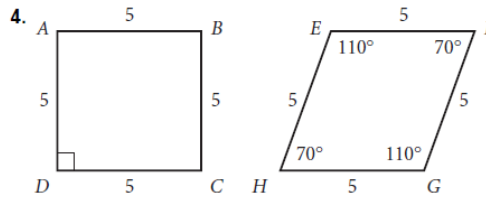
Similar Polygons and Triangles

In Exercises 1–4, determine whether the polygons are similar. Explain your reasoning. If the polygons are similar, write a similarity statement.

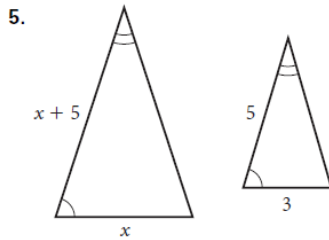


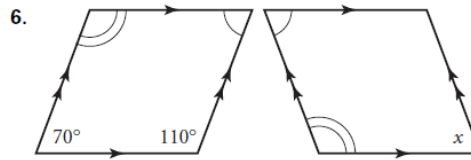






In Exercises 5 and 6, the polygons in each pair are similar. Find x .





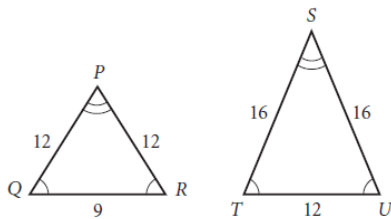
Solve each proportion for y .

7. $\frac{3y}{4.1} = \frac{6}{5}$

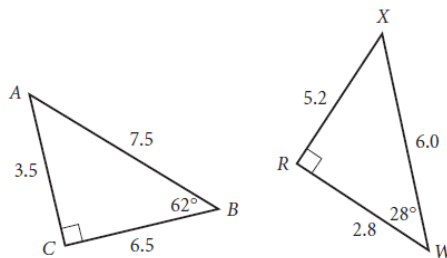
8. $\frac{36}{y+2} = \frac{24}{y}$

In Exercises 1 and 2, determine whether the polygons are similar. Explain your reasoning. If the polygons are similar, write a similarity statement.

1.

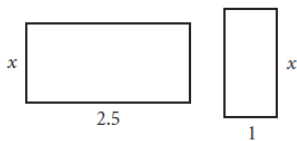


2.

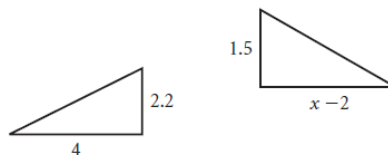


In Exercises 3 and 4, the polygons in each pair are similar. Find x .

3.



4.



Solve each proportion for y .

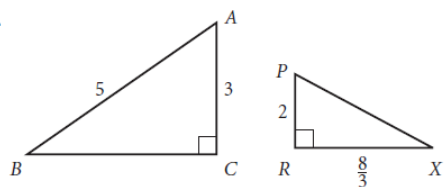
5. $\frac{2y + 1}{15} = \frac{3y - 2}{3}$ _____

6. $\frac{5}{2y} = \frac{18y}{5}$ _____

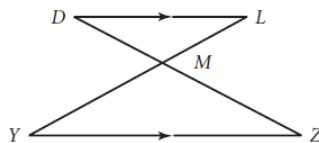
7. Carlos decides to make a scale drawing to help him plan how to arrange his furniture in his room in a new house. His new room will be 10 feet wide and 14 feet long, and he makes his scale drawing 5 inches wide and 7 inches long. His desktop measures 2 feet by 4.5 feet. What size rectangle should he use to represent his desk? _____

Each pair of triangles can be proven similar by using AA, SAS, or SSS information. Write a similarity statement for each pair, and identify the postulate or theorem used.

1.

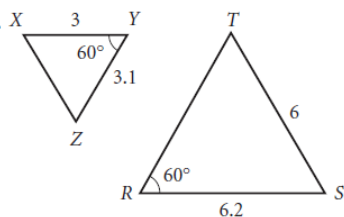


2.

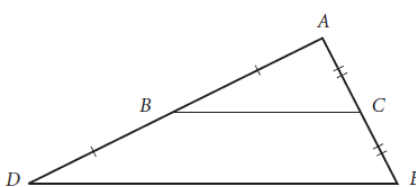


Determine whether each pair of triangles can be proven similar by using AA, SSS, or SAS. If so, write a similarity statement, and identify the postulate or theorem used.

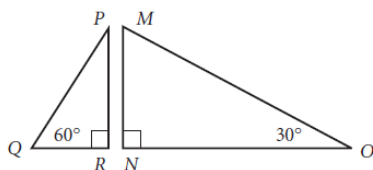
3.



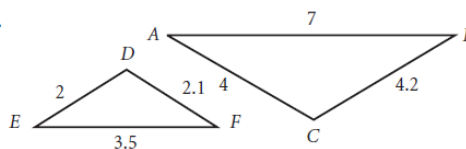
4.



5.



6.



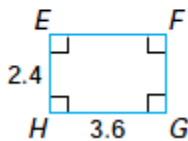
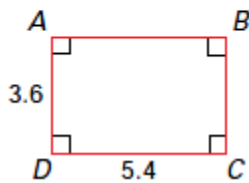
Similar Figures REVIEW

Classify each statement as true or false and explain your reasoning.

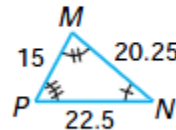
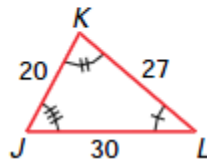
- If $\triangle ABC \sim \triangle DEF$, then $\triangle DEF \sim \triangle ABC$.
 - If $\triangle ABC \sim \triangle DEF$, then $\triangle ABC \sim \triangle EFD$.
 - If two figures are congruent, then they are similar.
 - If two figures are similar, then they are congruent.
 - Any two regular polygons with the same number of sides are similar.
12. Given the proportionality statement $\frac{JD}{LE} = \frac{DC}{EB} = \frac{CP}{BH} = \frac{PJ}{HL}$ for two similar rectangles, write a similarity statement that shows the correct correspondence.
13. Given $\triangle ABC \sim \triangle XYZ$, write a proportionality statement for the ratios between the sides.

For Exercises 16–19, determine whether the polygons are similar. Explain your reasoning.

16.

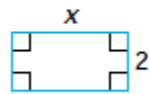
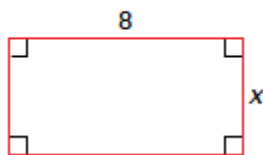


17.

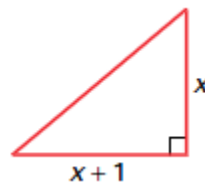
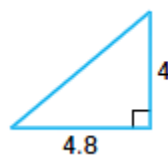


The given polygons are similar. Find x .

28.



29.



49. The angles of a triangle measure $(x + 5)^\circ$, $(5x + 12)^\circ$, and $(2x + 3)^\circ$. Find the measures of the angles. **(LESSON 3.5)**