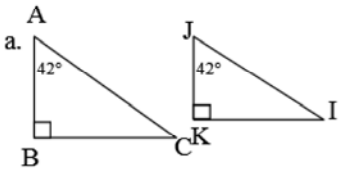
Geometry ***Name*** _____

Chapter 7 Review 2016 ***Date*** _____ ***Period*** _____

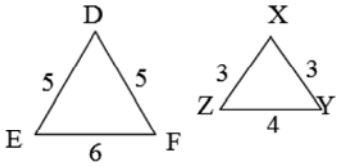
Directions: Show your work. Round to the nearest tenth, if necessary.

1. Determine whether the triangles are similar. If so, write the similarity statement and Name the postulate or theorem that can be used to prove the triangles are similar. (Not drawn to scale.)

a.



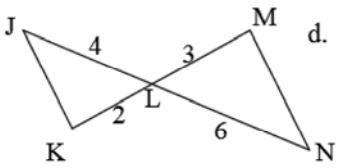
b.



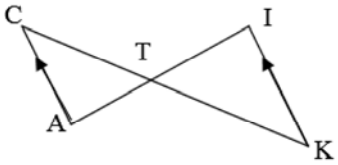
yes / no if yes Δ_____ ~ Δ_____ yes / no if yes Δ_____ ~ Δ_____

Why? Why?

c.



d.



yes / no if yes Δ_____ ~ Δ_____ yes / no if yes Δ_____ ~ Δ_____

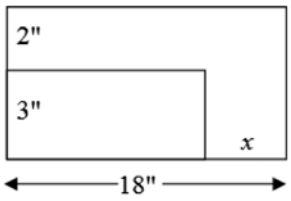
Why? Why?

2. Solve for x. Round to the nearest tenth.

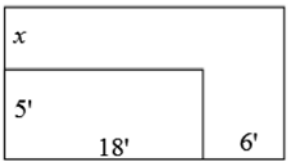
a. $\frac{8}{x-5} = \frac{-4}{3x-7}$ b. $\frac{x+3}{5} = \frac{8}{x-3}$

3. Given that the rectangles are similar, find x. Round to the nearest tenth.

a.



b.

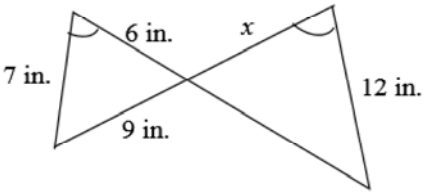


4. The ratio of the sides of two similar rectangles is 7 to 5.

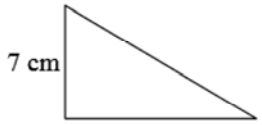
   a. The ratio of their perimeters is _____.

   b. The ratio of their areas is _____.

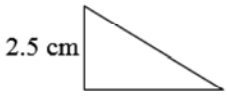
5. Solve for x. Round to the nearest tenth, if necessary.



6. Find the perimeter of triangle #2 (P_2) given the similar triangles.



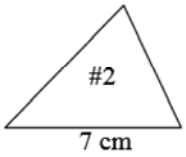
$P_1 = 35$ cm



$P_2 = ?$

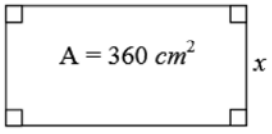
7. Find the area of triangle #2 (A_2) given the similar triangles.

$A_1 = 81$ cm^2

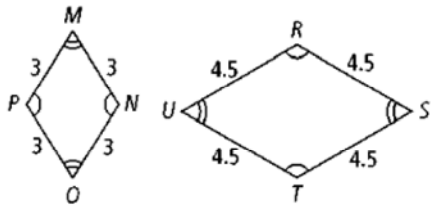


$A_2 = ?$

8. Find x. Round to the nearest tenth, if necessary.



9. Determine whether the polygons are similar. If so, write a similarity statement and give the scale factor. If not, explain.

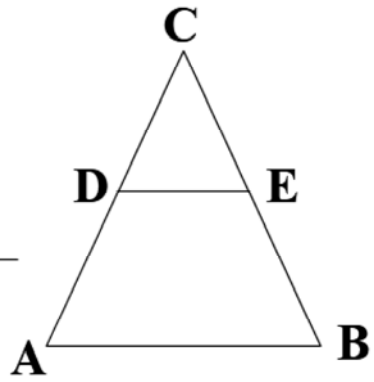


yes / no if yes : _____ ~ _____ If yes : scale factor:

10. A 1.4-m tall child is standing next to a flagpole. The child's shadow is 1.2 m long. At the same time, the shadow of the flagpole is 7.5 m long. How tall is the flagpole?

11. Given: $\overline{AB} \parallel \overline{DE}$

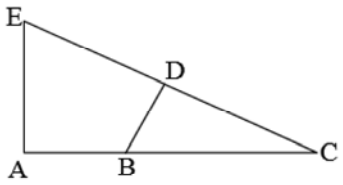
Prove: $\frac{AB}{DE} = \frac{AC}{DC}$



Statements	Reasons
1. $\overline{AB} \parallel \overline{DE}$	1. Given
2.	2.
3.	3.
4.	4.
5.	5.

12. Given: $CA \perp AE,\ BD \perp EC$

Prove: $\dfrac{BC}{CE} = \dfrac{BD}{AE}$



Statements	Reasons
1. $CA \perp AE,\ BD \perp EC$	1.
2. $\angle CAE$ & $\angle CDB$ are right angles.	2.
3. $\angle CAE \cong \angle CDB$	3.
4. $\angle C \cong \angle C$	4.
5. $\Delta CAE \sim \Delta CDB$	5.
6. $\dfrac{BC}{CE} = \dfrac{BD}{AE}$	6.