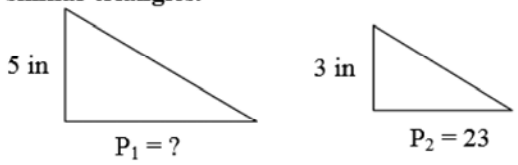
Geometry **Problem Set #5** **Name:**_____
2nd Semester Period:_____

1. **The ratio of the sides of two similar rectangles is 5 to 6.**

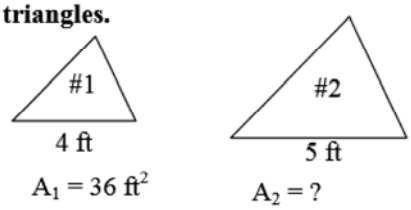
   a. The ratio of their perimeters is _____.

   b. The ratio of their areas is _____.

2. **Find the perimeter of triangle #1 (P_1) given the similar triangles. Round to the nearest tenth, if necessary.**

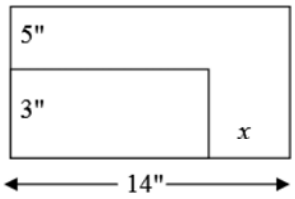


3. **Find the area of triangle #2 (A_2) given the similar triangles. Round to the nearest tenth, if necessary.**

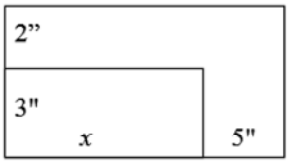


4. **Given that the rectangles are similar, find *x*. Round to the nearest tenth, if necessary.**

a.

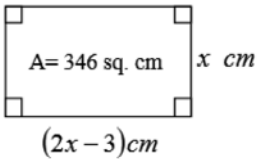


b.

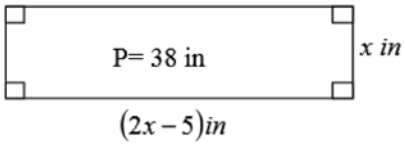


5. **Find *x*. Round to the nearest tenth, if necessary.**

a.



b.



6. The shadow of a 32-foot tree is 50 feet long. Find the height of the man next to the tree if the man is casting a shadow 12 feet long. Round to the nearest tenth, if necessary.

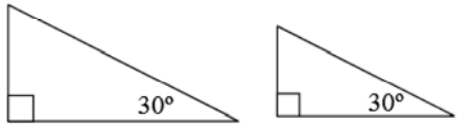
7. ***Solve for x. Round to the nearest tenth. Show all work!***

a. $\frac{2x-5}{7} = \frac{6-x}{8}$

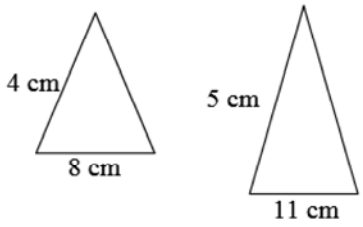
b. $\frac{x-3}{4} = \frac{7}{x+3}$

8. **Are the following figures similar? <u>Why or why not</u>?**

a.



b.

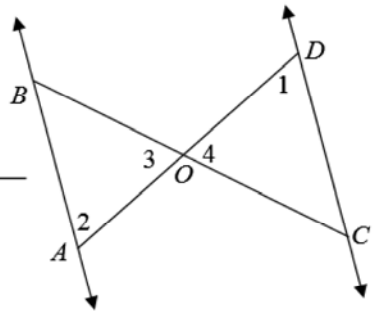


9. **Write the equation of the line through the given points in the form stated.**

a. (3,−8)(−6,−1); **point-slope** b. (−2,−6)(5,9); **slope-intercept**

10. <u>Given:</u> $\overleftrightarrow{AB} \parallel \overleftrightarrow{DC}$

<u>Prove:</u> $\Delta AOB \sim \Delta DOC$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.