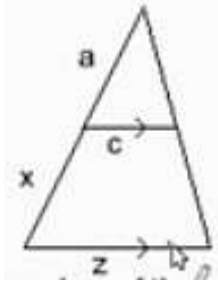Name:_____    Date: _____
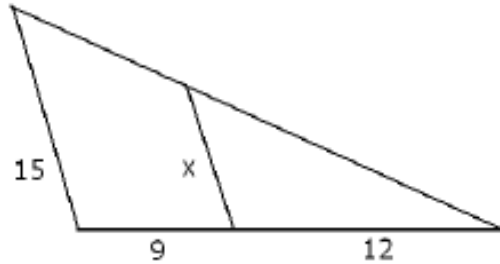
Geometry A U5D2 Similar Figures Nested Triangles  **HW**

**For questions 1 & 2, draw labeled separate diagrams.**

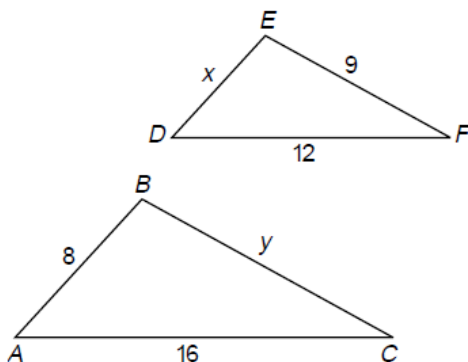**1)  Find x if  a = 10    c= 7    z= 14.**                    **2) Find x.**



3)
Solve for x.   $\dfrac{x-1}{3} = \dfrac{3x+2}{4}$

4) The shadow of a 4-foot pole is 6 feet long at the same time the shadow of a tower is 52.5 feet long. How tall is the tower?
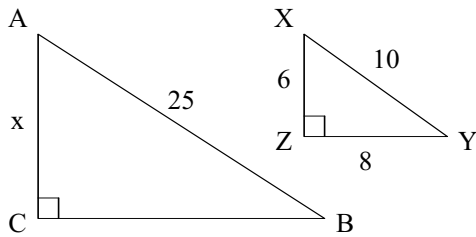
5) a) Find the value of x and y.
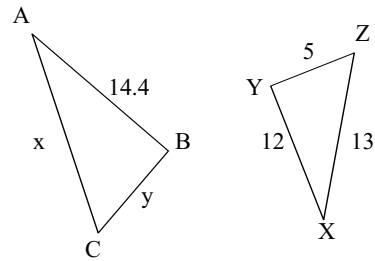


b) What is the ratio of corresponding sides?

c) What is the ratio of corresponding angles?

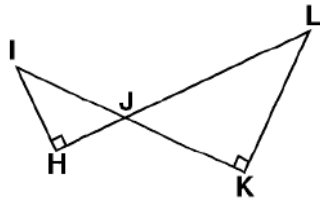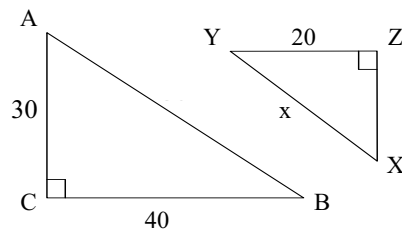**Find the missing side lengths in each pair of similar figures.**

6.  △ABC ~ △XYZ

A, X, 10, 6, 25, x, Z, 8, Y, C, B

7.  △ABC ~ △XYZ

A, 5, Z, 14.4, Y, x, B, 12, 13, y, X, C

8. In the accompanying diagram, △IHJ ~ △LKJ.
If IH = 5, HJ = 2, and LK = 7, find KJ.

I, L, J, H, K

9. △ABC ~ △XYZ

A, Y, 20, Z, 30, x, X, C, B, 40

10. Is triangle A(4, -1), B(5, 6), C(1, 3)
similar to triangle D(-4, -1), E(-2, 7), F(1, 2)?
Explain!

Y, X