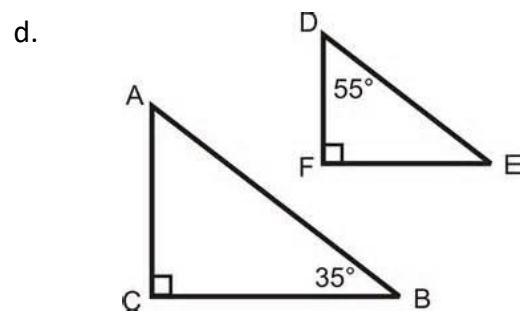
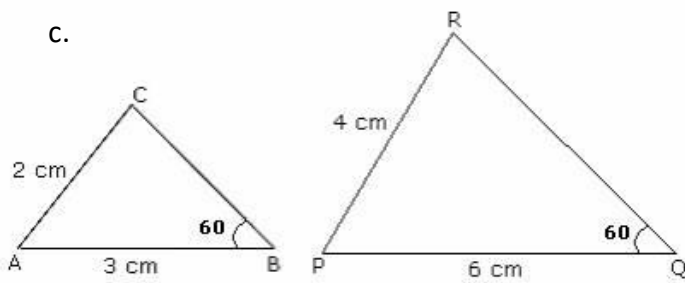
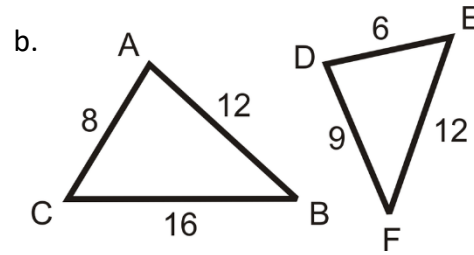
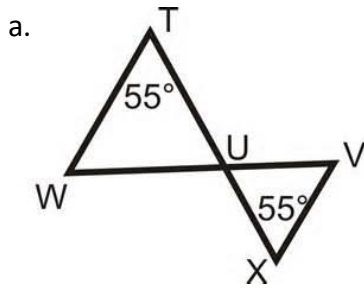
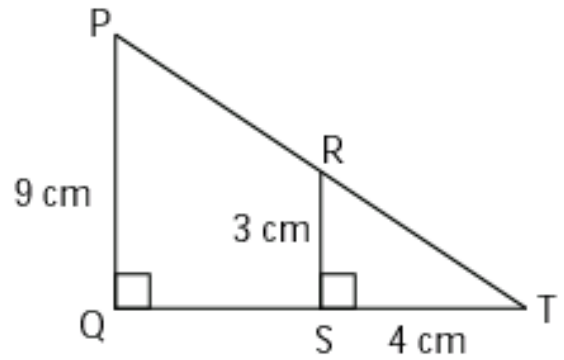


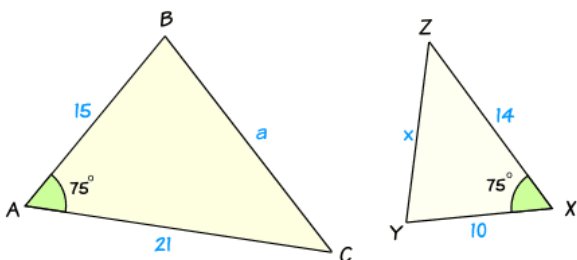
1. Determine if the following triangles are similar and show how you decided. If they are similar write a similarity statement.



2. Looking at the triangles in the figure on the right:
- Are the two triangles similar? How do you know?
  - What is the length of  $QT$ ?
  - If  $PT$  is 15 cm, what is the length of  $RT$ ?



3. Is the following pair of triangles similar? What postulate/theorem could you use? Show your work.

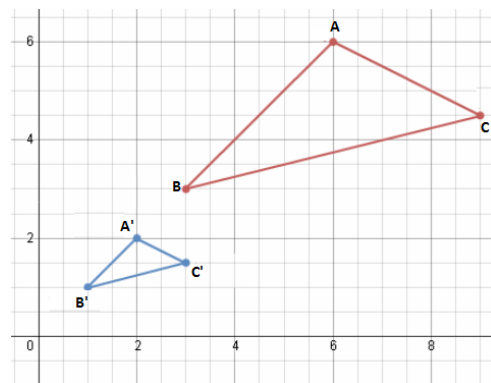


If  $a = 18$  what is the value of  $x$ ?

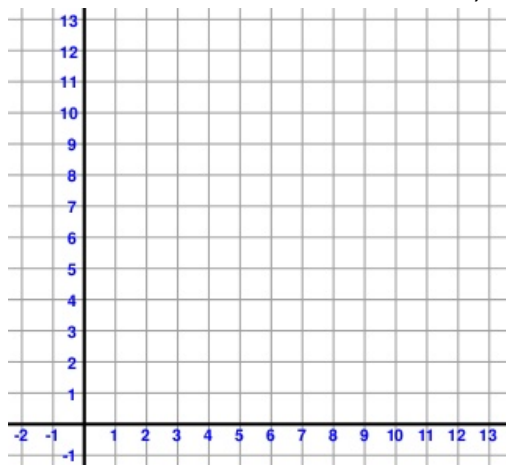
4. Tonya is 1.3 meters tall. She stands 7 meters in front of a tree and casts a shadow 1.8 meters long. How tall is the tree?

5. Stanwick is 6ft tall. The telephone pole he is standing next to is 40 ft tall. If Stanwick's shadow is 4 ft, how long is the shadow of the telephone pole?

6. Identify the image, pre-image, dilation, and scale factor of the following dilation with a center at the origin.



7. Under a dilation of scale factor  $\frac{1}{3}$  with center at the  $(1,1)$  if A is  $(4,10)$ , B is  $(7,4)$ , C is  $(13, 13)$ , what would the coordinates for A', B' and C' be?



8. Under a dilation of scale factor 3 with center at  $(2, -2)$ . if A is  $(-1,-1)$ , B is  $(-2,-2)$ , C is  $(-2, 1)$ , and D is  $(-1,2)$  what would the coordinates for A', B', C' and D' be?

