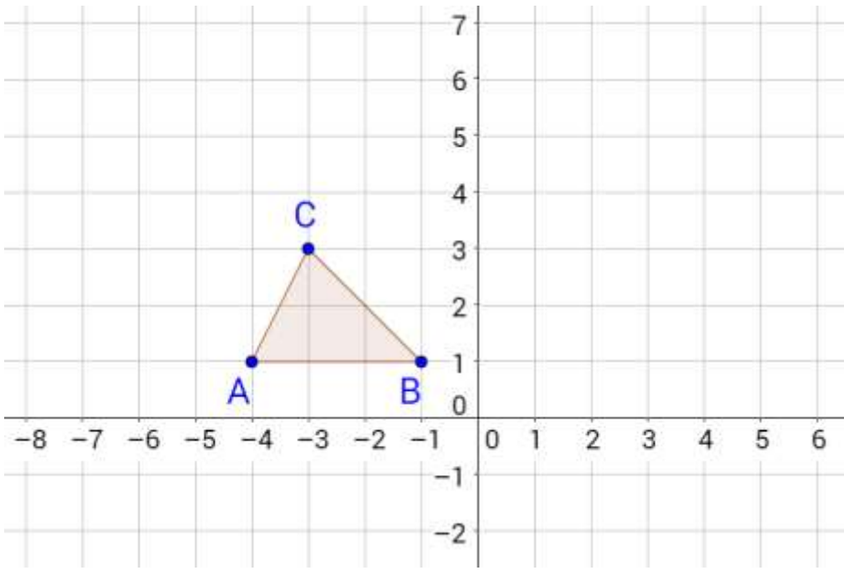
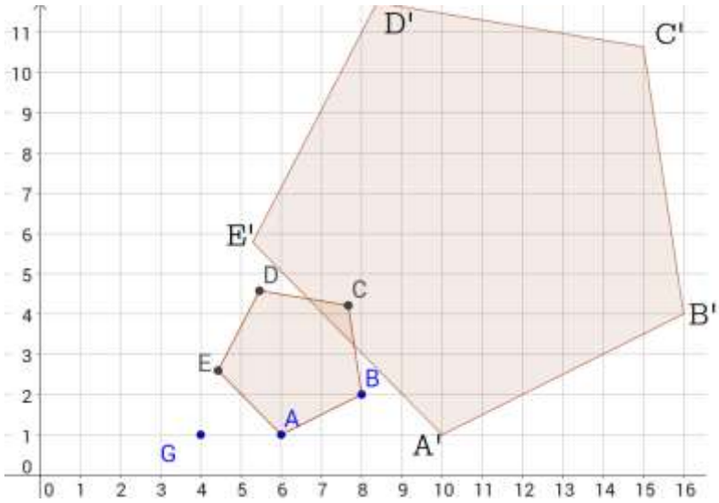
Similarity/Trig Review

SRT-1:

1. ΔABC is translated by rule $(x, y) \rightarrow (x + 1, y - 1)$. It *then* undergoes a dilation centered at the origin with scale factor 2. Draw the resulting image.



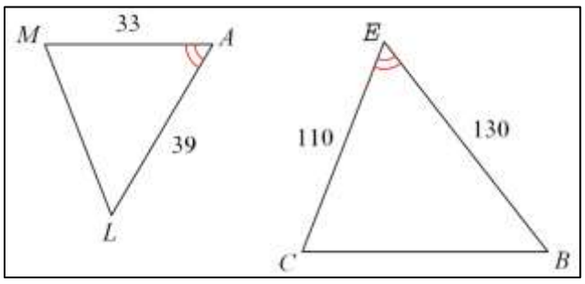
2. Pentagon ABCDE is dilated about point G to create pentagon $A'B'C'D'E'$. Determine the scale factor of dilation.

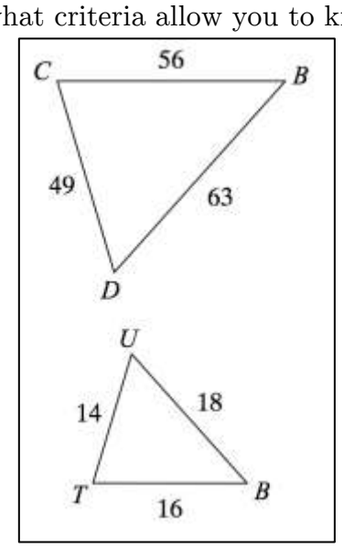


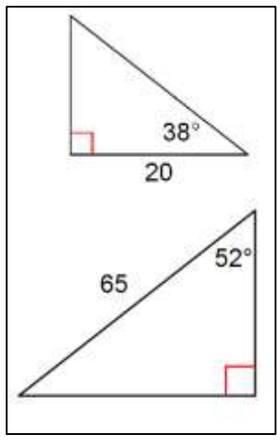
3. A rectangle is dilated using graphics software such that its area is 16 times the original. What was the scale factor of dilation?

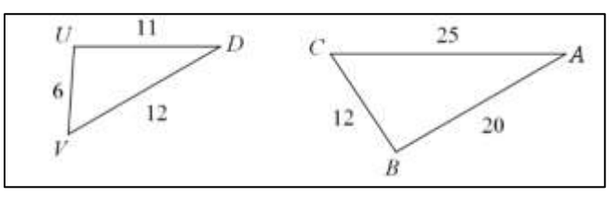
4. Given $\Delta ESQ \sim \Delta RPG$, SE = 16, RG=5, and PR = 4. What is the length of QE?

5. Are the triangles in each pair similar? If so, what criteria allow you to know?



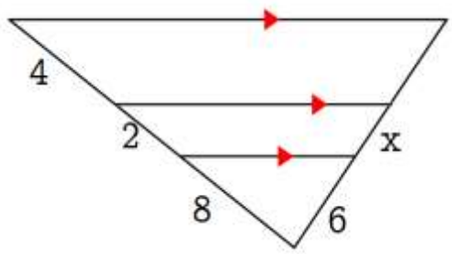






SRT-2:

6. Find the value of x.

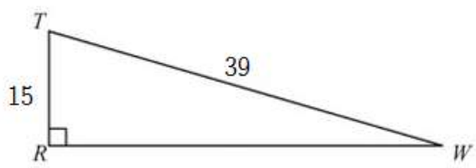


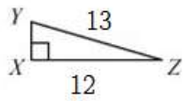
7. A rectangular tablet advertises an 11.6-inch diagonal length. If the screen is 6.8 inches wide, find the area of the rectangular screen.

SRT-3:

8. A right triangle has legs of length 10 and 24. Find the cosine of the smallest angle.

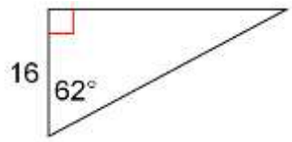
9. $\Delta RTW \sim \Delta XYZ$. Find tan Y (no calculator)



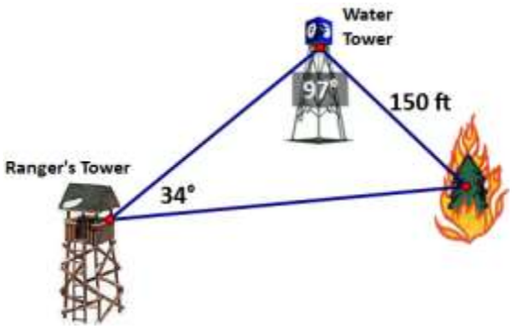


10. P and Q are complementary angles. sin P $= \frac{7}{25}$ and sin Q $= \frac{24}{25}$. Find tan Q.

11. Find the perimeter of this triangle to the nearest tenth.



12. A fire is spotted 150 feet away from a water tower. Based on the diagram below, find the distance between the ranger tower and the fire to the nearest foot.



13. Find the measure of angle C. It may help to find a missing side length first.