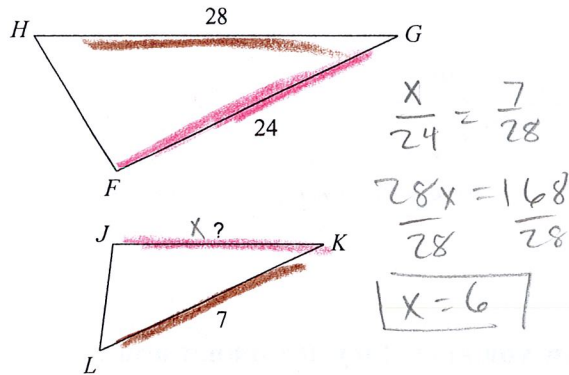


Review 2B

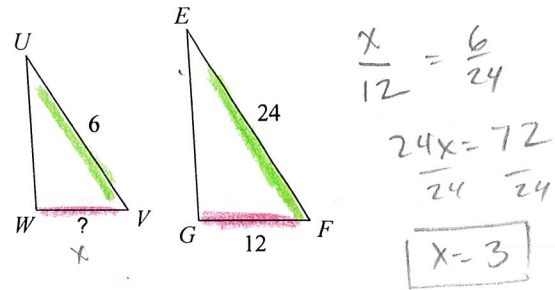
Date _____

Find the missing length. The triangles in each pair are similar.

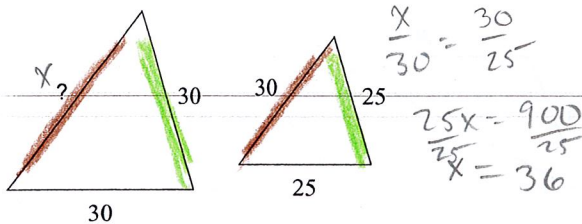
1) $\triangle FGH \sim \triangle JKL$



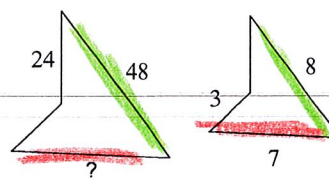
2) $\triangle EFG \sim \triangle UVW$



3)



4)

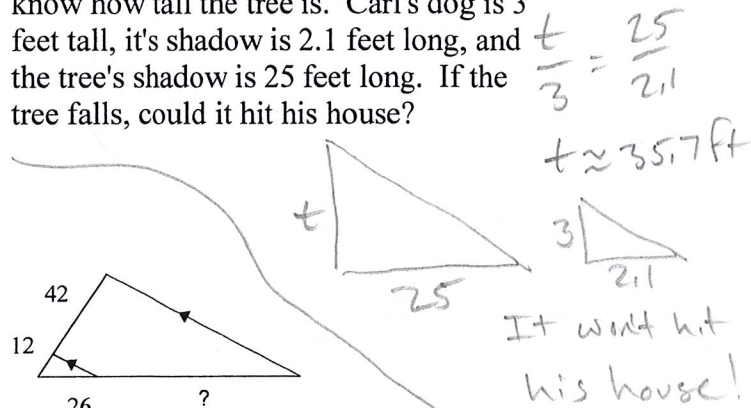


5) A scale drawing of a room is 5.3 inches wide by 12.5 inches long. What is the width of the room if the actual length is 35 feet?

$$\frac{5.3}{12.5} = \frac{x}{35}$$

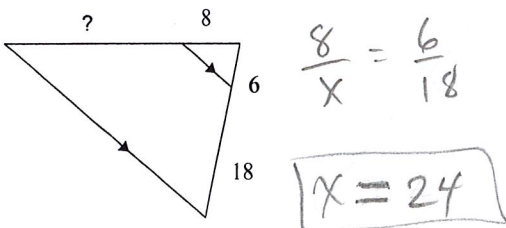
$$x = 14.84 \text{ in}$$

6) Carl has an old tree in his yard that he is worried may fall in a storm and possibly hit his house 40 feet away. He needs to know how tall the tree is. Carl's dog is 3 feet tall, it's shadow is 2.1 feet long, and the tree's shadow is 25 feet long. If the tree falls, could it hit his house?

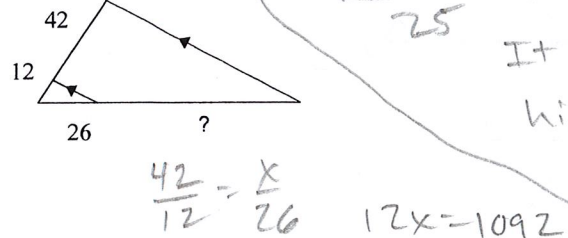


Find the missing length indicated.

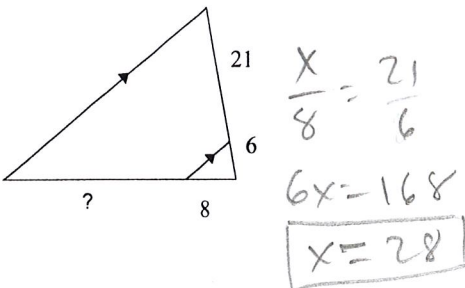
7)



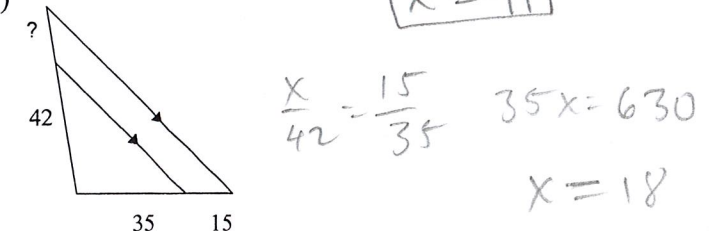
8)



9)

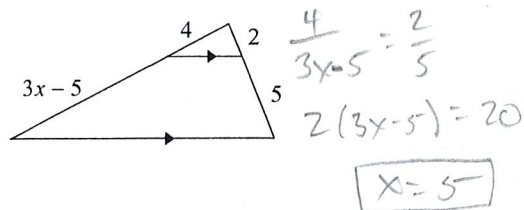


10)

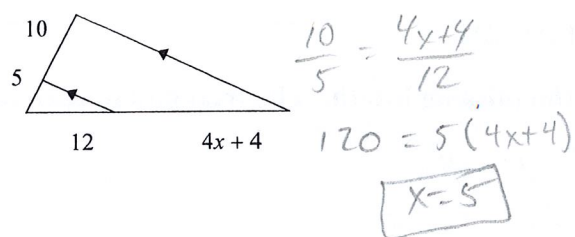


Solve for x.

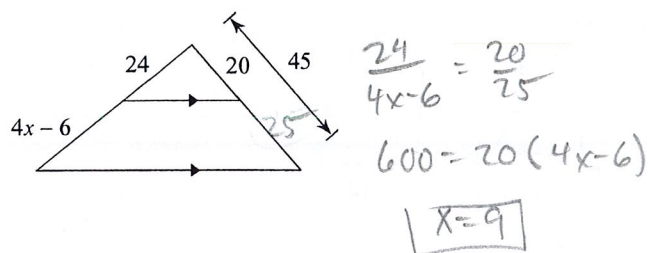
11)



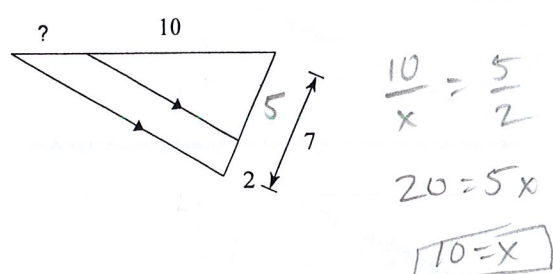
12)



13)

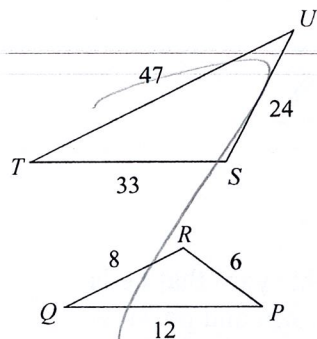


14)



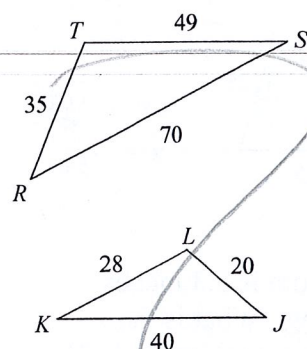
State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement. (SSS, SAS, AA, or not similar)

15)



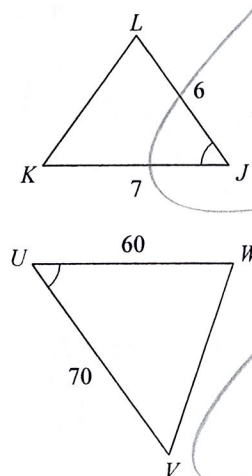
$\triangle UTS \sim$ _____

16)



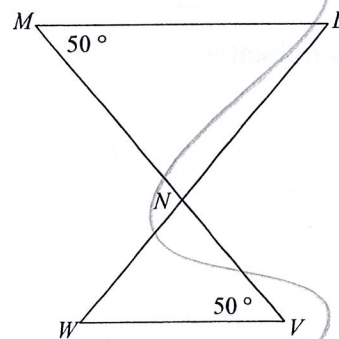
$\triangle RST \sim$ _____

17)



$\triangle UVW \sim$ _____

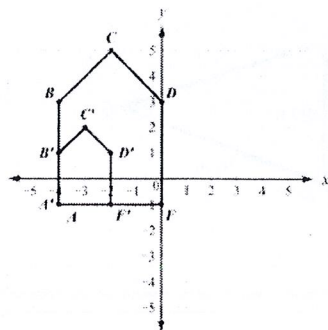
18)



$\triangle NML \sim$ _____

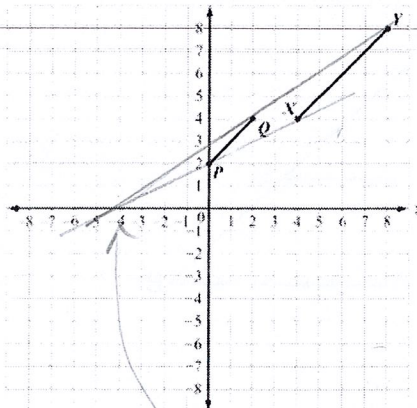
NOPE.
NOT ON
TEST

15. Figure $A'B'C'D'F'$ is a dilation of figure $ABCDF$ by a scale factor of $\frac{1}{2}$. The dilation is centered at $(-4, -1)$.



$$\frac{AB}{BC} = \frac{A'B'}{B'C'} \quad \frac{B'C'}{C'D'} = \frac{BC}{CD} \quad \frac{DE}{AB} = \frac{D'E'}{A'B'}$$

16. In a coordinate plane, segment \overline{PQ} is the result of a dilation of segment \overline{XY} by a scale factor of $\frac{1}{2}$.



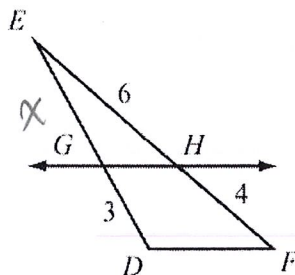
$(-4, 0)$

What point is the center of dilation?

$(-4, 0)$

17. In the triangle shown, $\overline{GH} \parallel \overline{DF}$.

What is the length of \overline{GE} ?

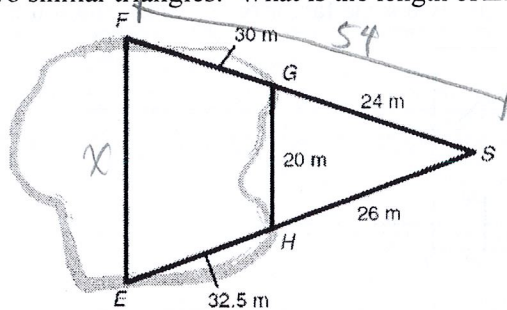


$$\frac{x}{3} = \frac{6}{4}$$

$$4x = 18$$

$$x = \frac{9}{2} = 4.5$$

18. The figure below shows two similar triangles. What is the length of \overline{EF} ?

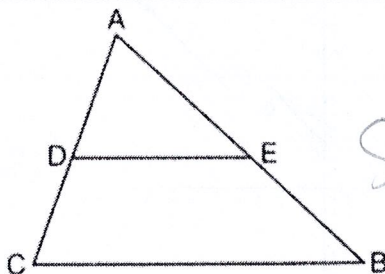


$$\frac{24}{54} = \frac{20}{x}$$

$$24x = 1080$$

$$x = 45$$

19. In the figure below, $\overline{AC} = 2\overline{AD}$. Which is enough to prove $\triangle ADE \sim \triangle ACB$?



SKIP THIS ONE!

20. $\triangle ABC$ is similar but not congruent to $\triangle DEF$. True or False

F maybe, but not for sure
 $\triangle ABC$ was dilated by a scale factor between 0 and 1

T $\frac{AB}{DE} = \frac{BC}{EF}$

T $\angle A = \angle D$

F $\overline{AB} = \overline{DE}$

21. Right triangle ABC is shown below.

$$\triangle ABC \sim \triangle DEF$$

What is the ratio of side BC to side AC?

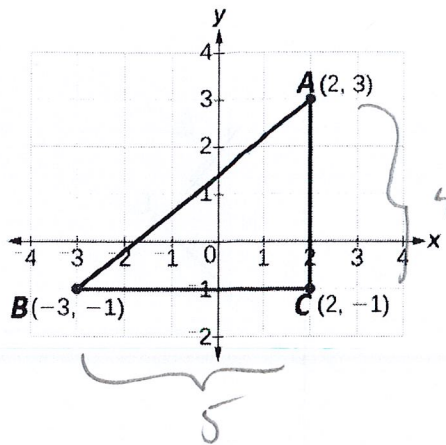
$$\frac{BC}{AC} = \frac{5}{4}$$

What is the ratio of AC:BC?

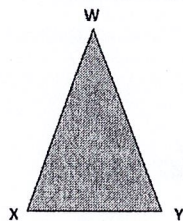
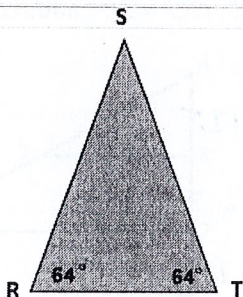
$$\frac{4}{5}$$

What line segment corresponds to \overline{DE} ? \overline{AB}

What is the ratio of EF to DF? $\frac{EF}{DF} = \frac{BC}{AC} = \frac{5}{4}$

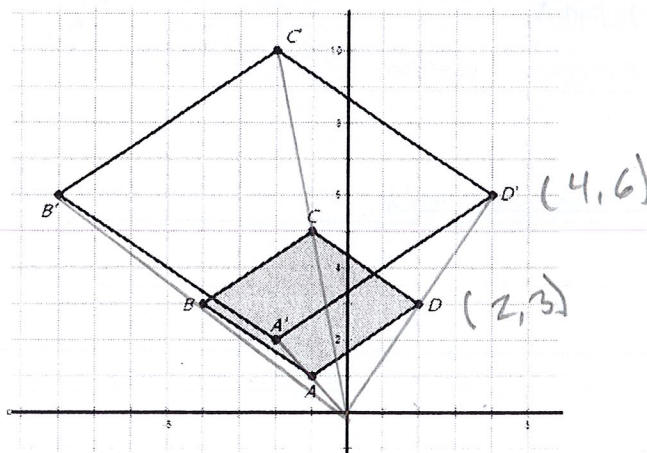


22. Triangle SRT is an isosceles triangle. $\triangle SRT \sim \triangle WXY$.



$$\angle X = \angle R = 64^\circ \quad \angle W = \angle S = 52^\circ \quad \angle S \cong \angle W \quad \angle X + \angle Y \cong \angle R + \angle T = 128^\circ$$

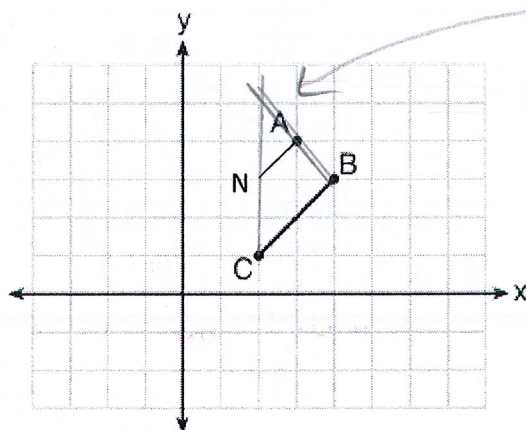
23. Quadrilateral ABCD has been dilated to its image A'B'C'D'. Which is the correct scale factor and center of dilation?



$$K = 2$$

Center of dilation (0,0)

24. Line segment AN has been dilated to the image CB. Which is the correct scale factor and center of dilation?

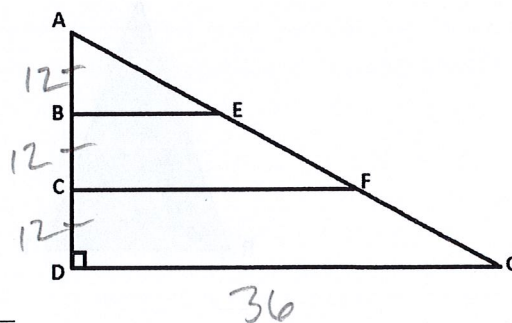


CTR of Dilation (2,5)

What is the scale factor if CB is dilated to AN?

How did it change from the question above?

25. In right triangle ADG below, \overline{BE} , \overline{CF} , and \overline{DG} are parallel. $\overline{AB} = 12$, $\overline{DG} = 36$, and $\overline{AB} = \overline{BC} = \overline{CD}$.



- A. What is the length of \overline{AD} ? $12 \cdot 3 = 36$

- B. Complete the similarity statement: $\triangle ABE \sim \triangle ACF \sim \triangle ADG$

- C. What is the length of \overline{BE} ? 12

- D. What is the length of \overline{CF} ? 24

- B. Explain how you found your answer to part A

The 3 side pieces were \approx

so I added them up.

$$\frac{12}{36} = \frac{x}{36}$$

$$\frac{24}{36} = \frac{x}{36}$$