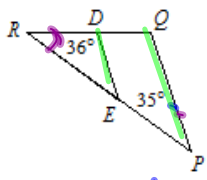
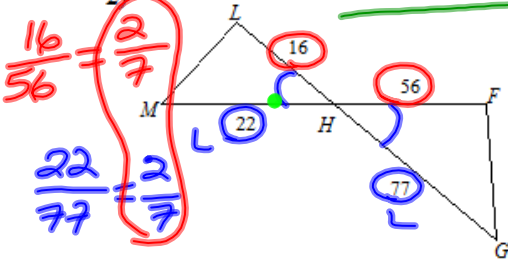


Name _____

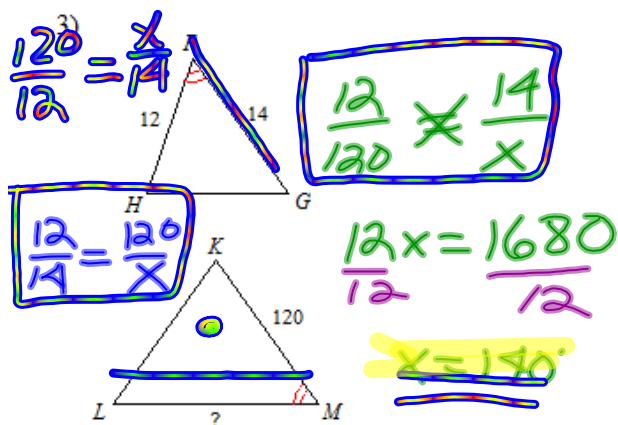
Unit 6 REVIEW (second)

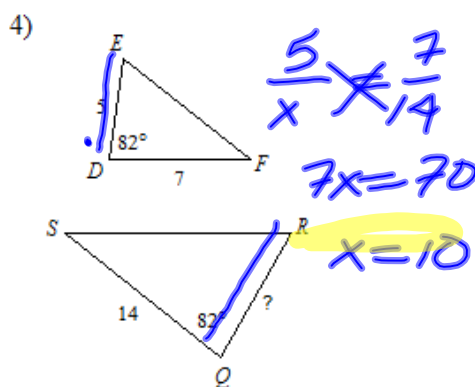
State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

1)  $\triangle RQP \sim \triangle DEP$

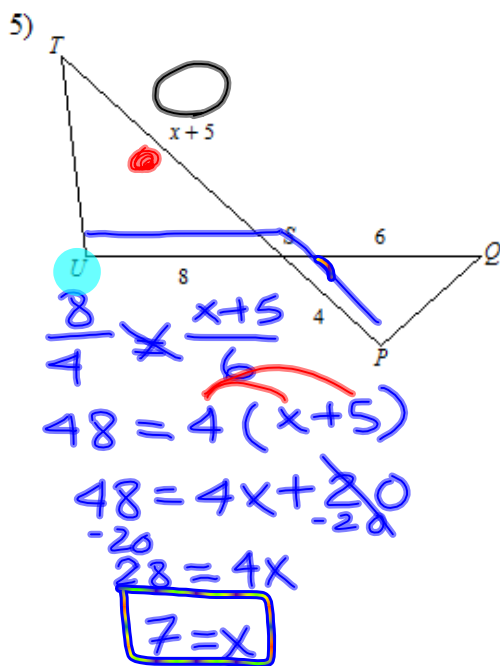
2)  Thm: SAS
 $\triangle HGF \sim \triangle HML$

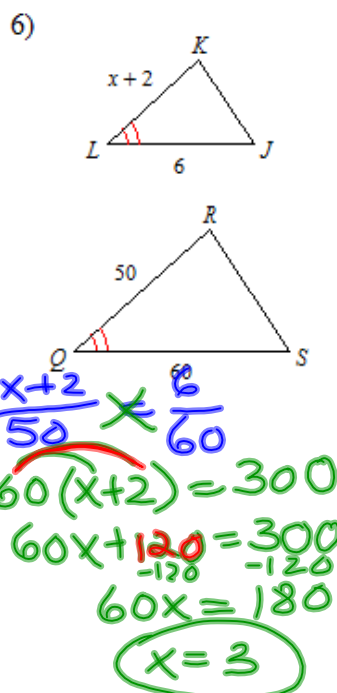
Find the missing length. The triangles in each pair are similar.

3)  $\frac{12}{12} = \frac{x}{14}$
 $\frac{12}{120} = \frac{14}{x}$
 $12x = 1680$
 $x = 140$

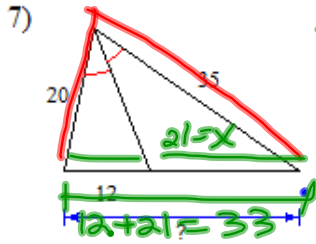
4)  $\frac{5}{14} = \frac{7}{x}$
 $7x = 70$
 $x = 10$

Solve for x. The triangles in each pair are similar.

5)  $\frac{8}{4} = \frac{x+5}{6}$
 $48 = 4(x+5)$
 $48 = 4x + 20$
 $28 = 4x$
 $7 = x$

6)  $\frac{x+2}{50} = \frac{6}{60}$
 $60(x+2) = 300$
 $60x + 120 = 300$
 $60x = 180$
 $x = 3$

Find the missing length indicated.

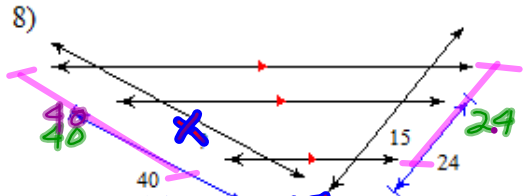


$$\frac{20}{35} = \frac{12}{x}$$

$$20x = 420$$

$$x = 21$$

$$\frac{x}{15} = \frac{40}{24}$$

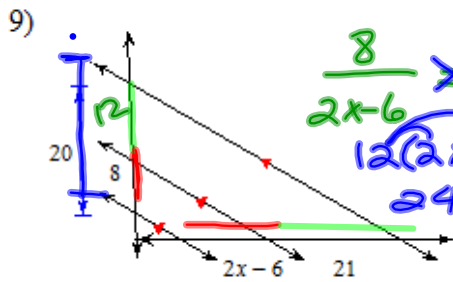


$$\frac{x}{40} = \frac{15}{24}$$

$$24x = 600$$

$$x = 25$$

Solve for x.



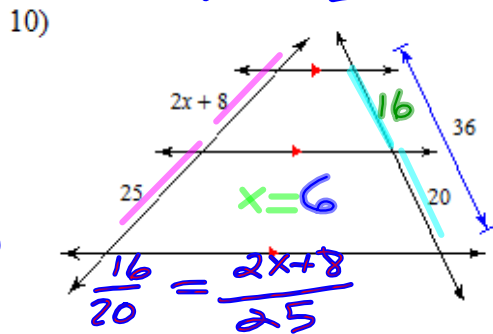
$$\frac{8}{2x-6} = \frac{12}{21}$$

$$12(2x-6) = 168$$

$$24x - 72 = 168$$

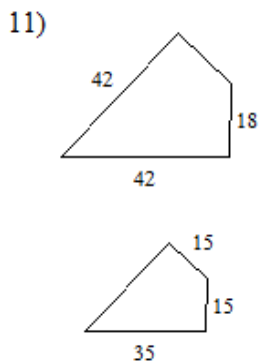
$$24x = 240$$

$$x = 10$$



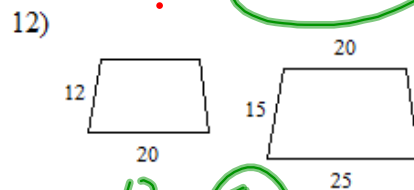
$$\frac{16}{20} = \frac{2x+8}{25}$$

The polygons in each pair are similar. Find the scale factor of the smaller figure to the larger figure.



$$\frac{35}{42} = \frac{5}{6}$$

$$\underline{\underline{5:6}}$$

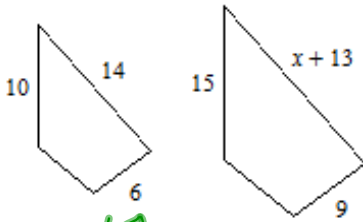


$$\frac{12}{15} = \frac{4}{5}$$

$$4:5$$

Solve for x . The polygons in each pair are similar.

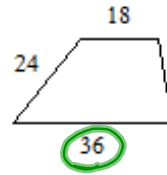
13)



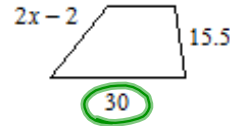
$$\frac{6}{9} = \frac{14}{x+13}$$

$$x = 8$$

14)



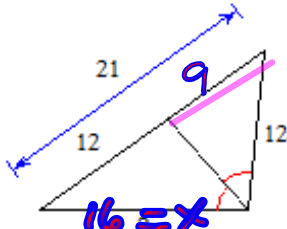
$$\frac{36}{30} = \frac{24}{2x-2}$$



$$x = 11$$

Find the missing length indicated.

15)

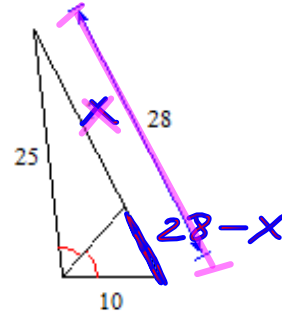


$$\frac{12}{9} = \frac{x}{12} \quad , \quad \frac{12}{x} = \frac{9}{12}$$

$$\frac{25}{x} = \frac{10}{28-x}$$

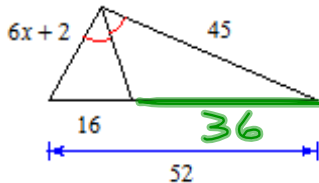
$$x = 20$$

16)



Solve for x .

17)



$$\frac{6x+2}{45} \neq \frac{16}{36}$$

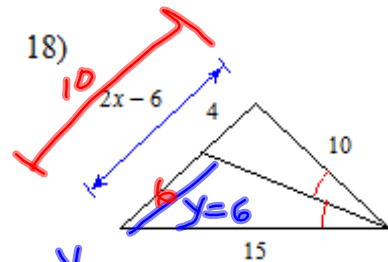
$$36(6x+2) = 720$$

$$216x + 72 = 720$$

$$216x = 648$$

$$x = 3$$

18)



$$\frac{4}{10} \neq \frac{y}{15}$$

$$10y = 60$$

$$y = 6$$

$$2x-6 = 10$$

$$2x = 16$$

$$x = 8$$

19. In the diagram WXYZ is similar to MNOP. Find the perimeter of **both** polygons.

$\frac{12}{x} = \frac{8}{10}$
 $120 = 8x$
 $15 = x$

$P_{MNOP} = 50$
 $P_{WXYZ} = 50 \cdot \frac{4}{5} = 40$

S.F. = $\frac{10}{8} = \frac{5}{4}$
 or $\frac{4}{5}$

20. Find the perimeter.

$STUV \sim XYZW$ S.F. = $\frac{5}{3}$

$P_{STUV} = 100 \cdot \frac{3}{5} = 60$

21. Find the perimeter.

$\triangle LMN \sim \triangle PQR$

22. Find all the variables.

$\frac{f}{10} = \frac{12}{15}$
 $f = 8$

$\frac{25}{12.5} = \frac{10}{d}$
 $d = 5$

$\frac{e}{5} = \frac{12}{15}$
 $e = 4$

$\frac{c}{12.5} = \frac{30}{25}$
 $c = 15$

$\frac{b}{12.5} = \frac{15}{12}$
 $b = 15.625$

$\frac{a}{36.5} = \frac{12.5}{20}$
 $a = 22.8125$

a = 22.8125
 b = 15.625
 c = 15
 d = 5
 e = 4
 f = 8