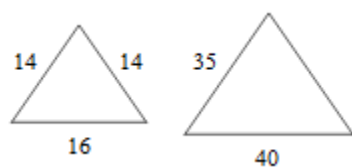
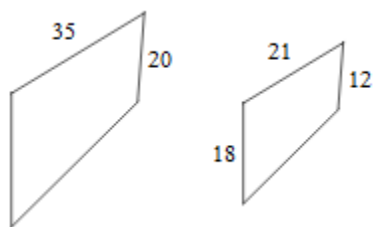


See ANSWERS below on PAGE 3.

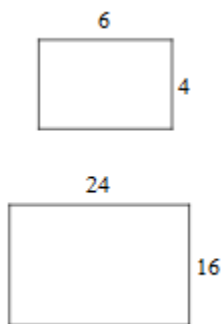
1.



2.



3.

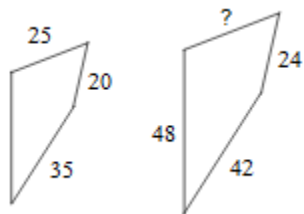


The polygons in each pair are similar. Find the missing side length.

4.

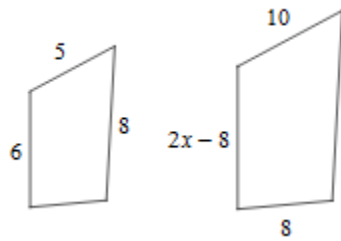


5.

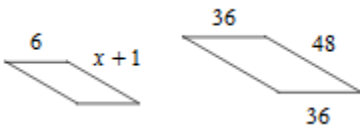


The polygons in each pair are similar. Solve for x .

6.



7.

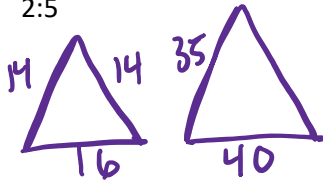


8. Triangle PQR is similar to triangle XYZ. $PQ = 5$, $QR = 6$, $PR = 10$, and $XY = 30$. What is the perimeter of triangle XYZ?

9. Triangle HIJ is similar to triangle STR. $IH = 4$, $IJ = 6$, $ST = 10$, and $SR = 12$. What is the perimeter of triangle STR?

Answers:

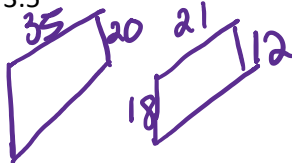
1. 2:5



$$\frac{16x}{16} = \frac{40}{16}$$

$$x = \frac{5}{2} \text{ or } 2:5$$

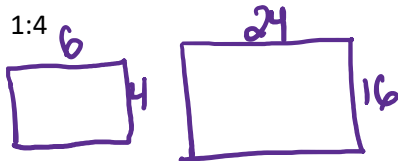
2. 3:5



$$\frac{25x}{25} = \frac{21}{25}$$

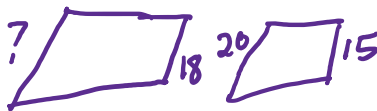
$$x = \frac{3}{5} \text{ or } 3:5$$

3. 1:4



$$1:4 \text{ or } 4$$

4. 24

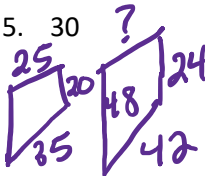


$$\frac{18x}{18} = \frac{15}{18}$$

$$x = \frac{5}{6}$$

$$? = 24$$

5. 30



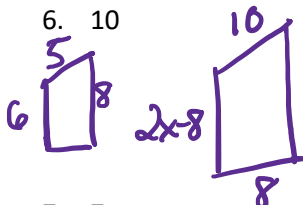
$$\frac{35x}{35} = \frac{42}{35}$$

$$x = \frac{6}{5}$$

$$25\left(\frac{6}{5}\right) = ?$$

$$? = 30$$

6. 10



Scale factor = 2

$$6(2) = 2x - 8$$

$$12 = 2x - 8$$

$$+8 \quad +8$$

$$20 = 2x$$

$$\div 2 \quad \div 2$$

$$10 = x$$

$$x = 10$$

7. 7



Scale factor = 6

$$6(x+1) = 48$$

$$6x + 6 = 48$$

$$-6 \quad -6$$

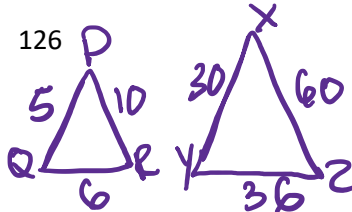
$$6x = 42$$

$$\div 6 \quad \div 6$$

$$x = 7$$

$$x = 7$$

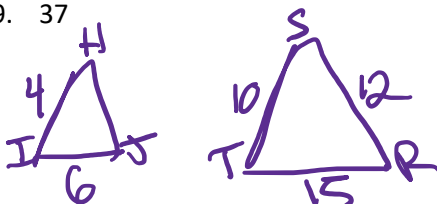
8. 126



Scale factor = 6

$$P = 30 + 60 + 36 = 126$$

9. 37



$$\frac{4x}{4} = \frac{10}{4}$$

$$x = \frac{5}{2}$$

$$6\left(\frac{5}{2}\right) = TR$$

$$15 = TR$$

$$P = 10 + 12 + 15 = 37$$