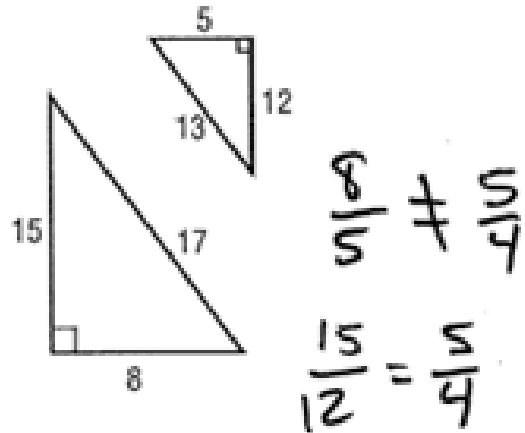


Get out your homework and have it ready to check. Quiz tomorrow!

Classwork - Quiz Review

Determine whether each pair of polygons is similar. Explain.

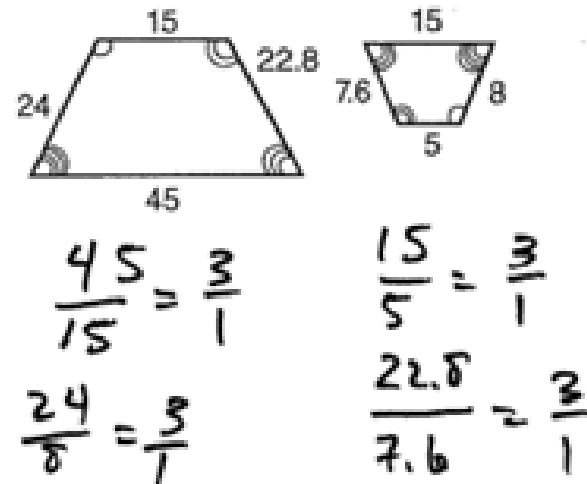
1.



Similar? No

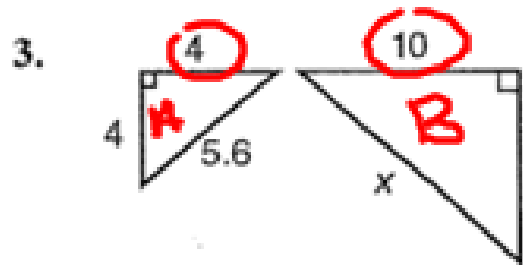
Explanation: Corresponding sides don't have the same ratio.

2.



Similar? Yes

Explanation: Corresponding angles are congruent and corresponding sides all have the same ratio.



$\frac{A}{B}$

$$\frac{6}{3} = \frac{x}{18}$$

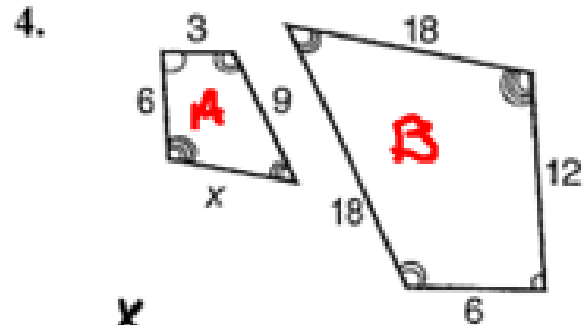
$\frac{A}{B}$

$$\frac{4}{10} = \frac{5.6}{x}$$

$$\frac{4x}{4} = \frac{56}{4}$$

$$x = 14$$

$$x = \underline{14}$$

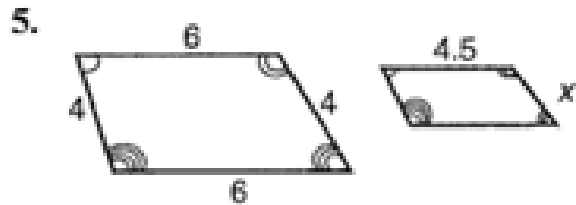


$$\frac{x}{18} = \frac{6}{12}$$

$$\frac{12x}{12} = \frac{108}{12}$$

$$x = 9$$

$$x = \underline{9}$$

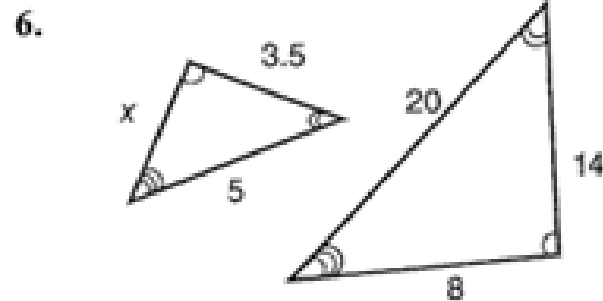


$$\frac{6}{4.5} = \frac{4}{x}$$

$$\frac{6x}{6} = \frac{18}{6}$$

$$x = 3$$

$$x = \underline{3}$$



$$\frac{x}{8} = \frac{5}{20}$$

$$\frac{20x}{20} = \frac{40}{20}$$

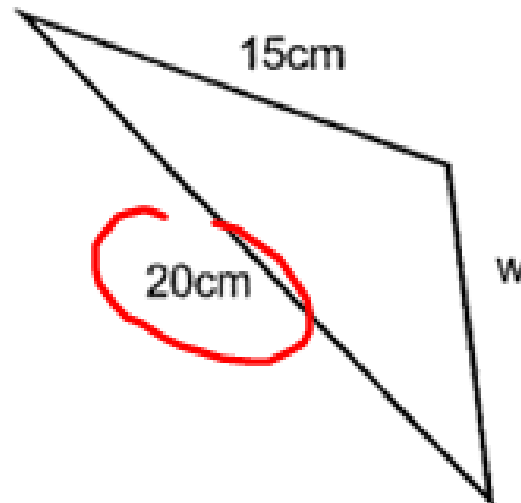
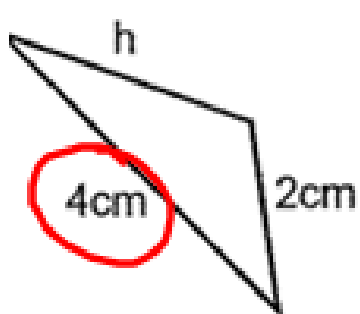
$$x = 2$$

$$x = \underline{2}$$

7. **TILES** A blue rectangular tile and a red rectangular tile are similar. The blue tile has a length of 10 inches and a perimeter of 30 inches. The red tile has a length of 6 inches. What is the perimeter of the red tile?

$$\begin{array}{l} \text{length} \rightarrow \frac{10 \text{ in}}{30 \text{ in}} = \frac{6 \text{ in}}{x} \\ \text{perimeter} \rightarrow \end{array} \quad \frac{10x = 180}{10} \quad x = 18 \text{ in}$$

8. The triangles are similar. Solve for the missing side lengths. SHOW WORK AND LABEL



$$\frac{4}{20} = \frac{h}{15}$$

$$\frac{20h = 60}{20} \quad \frac{60}{20}$$

$$h = 3$$

$$h = \underline{3 \text{ cm}}$$

$$\frac{4}{20} = \frac{2}{w}$$

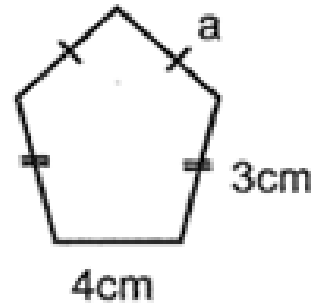
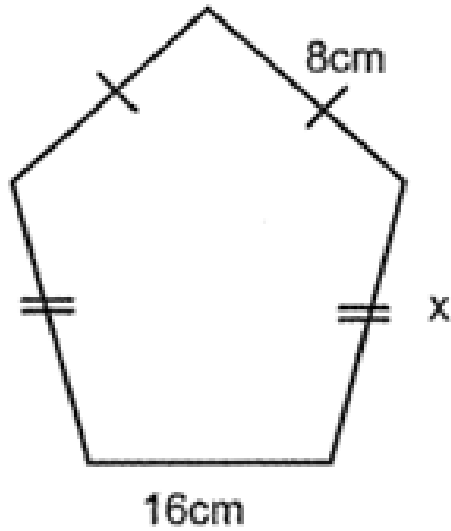
$$\frac{4w = 40}{4} \quad \frac{40}{4}$$

$$w = 10$$

$$w = \underline{10 \text{ cm}}$$

9. The triangles are similar. Solve for the missing side lengths. SHOW WORK AND LABEL

9. The pentagons are similar. Solve for the missing side lengths. SHOW WORK AND LABEL



$$\frac{16}{4} = \frac{x}{3}$$

$$4x = 48$$
$$\frac{4x}{4} = \frac{48}{4}$$

$$x = 12$$

$$x = \underline{12\text{cm}}$$

$$\frac{16}{4} = \frac{8}{a}$$

$$16a = 32$$
$$\frac{16a}{16} = \frac{32}{16}$$

$$a = 2$$

$$a = \underline{2\text{cm}}$$

$$\text{old side} \cdot \text{scale factor} = \text{new side} \quad \text{Scale Factor Ratio Comparing Corresponding Sides} \rightarrow \frac{\text{New}}{\text{Old}}$$

1) Quadrilateral ABCD is similar to Quadrilateral QRST.

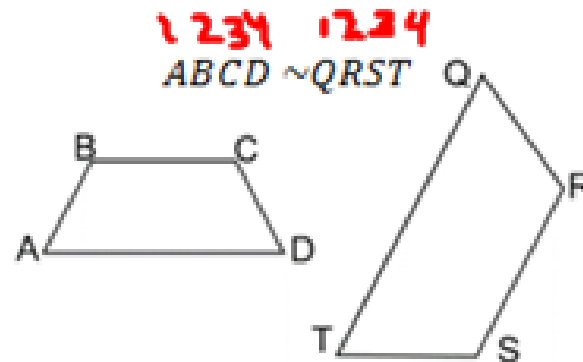
A) State the names of the corresponding angles.

$\angle A$ corresponds to \angle _____

$\angle B$ corresponds to \angle _____

$\angle C$ corresponds to \angle _____

$\angle D$ corresponds to \angle _____



B) State the names of the corresponding Sides.

Side AB corresponds with Side _____.

Side BC corresponds with Side _____.

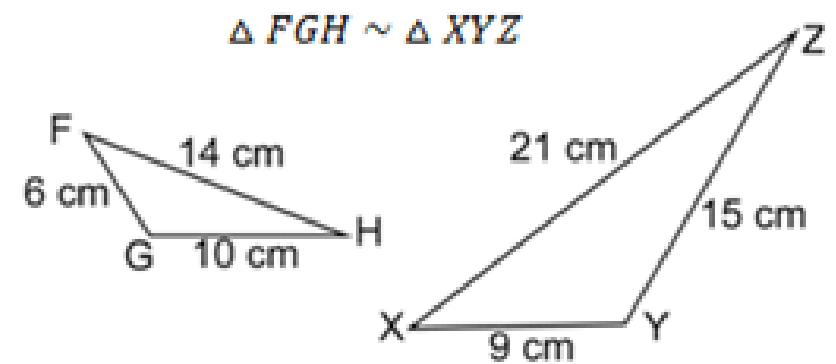
Side CD corresponds with Side _____.

Side AD corresponds with Side _____.

2) Triangle FGH is similar to Triangle XYZ .

A) Find the scale factor going from $\triangle FGH$ to $\triangle XYZ$.

Show that every pair of corresponding sides has the same simplified scale factor. Not just one!



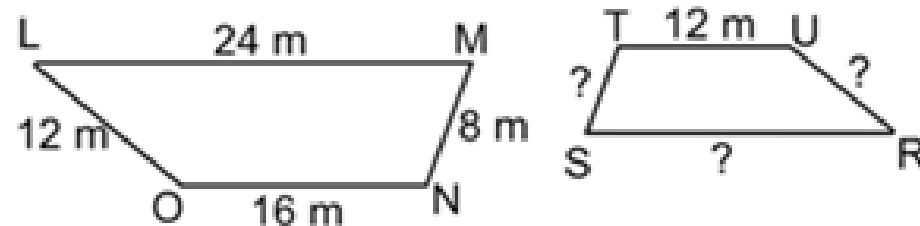
B) What would the scale factor be going from $\triangle XYZ$ to $\triangle FGH$. *Hint* \rightarrow The new and old are different.

3) Use the similar figures to the right to answer the following problem.

A) Find the scale factor going from $LMNO$ to $RSTU$.

SHOW WORK

$LMNO \sim RSTU$



B) Use the scale factor to find all the missing sides on the new figure. **SHOW WORK** $RS =$ _____

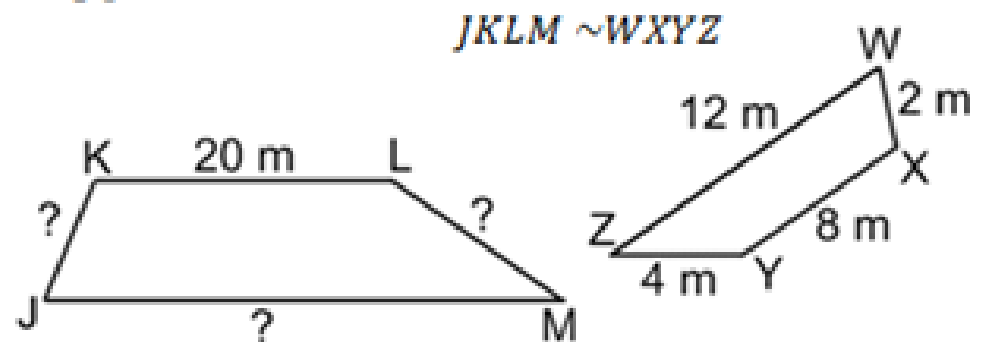
$ST =$ _____

$RU =$ _____

4) Use the similar figures to the right to answer the following problem.

A) Find the scale factor going from WXYZ to JKLM.

SHOW WORK



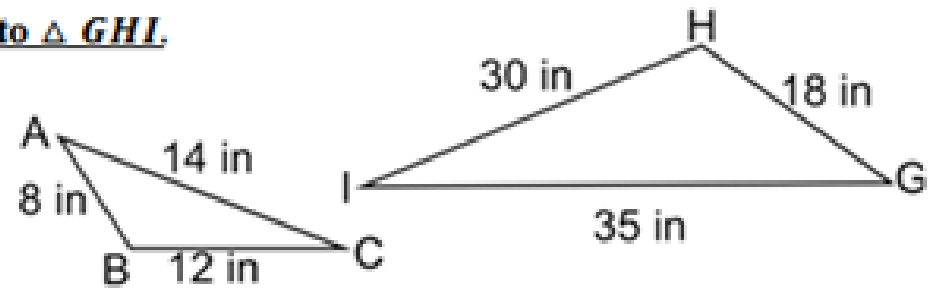
B) Use the scale factor to find all the missing sides on the new figure. **SHOW WORK** $JK =$ _____

$LM =$ _____

$JM =$ _____

5) Determine if the figures are similar or not.

A) Find the ratio of each corresponding side from $\triangle ABC$ to $\triangle GHI$.

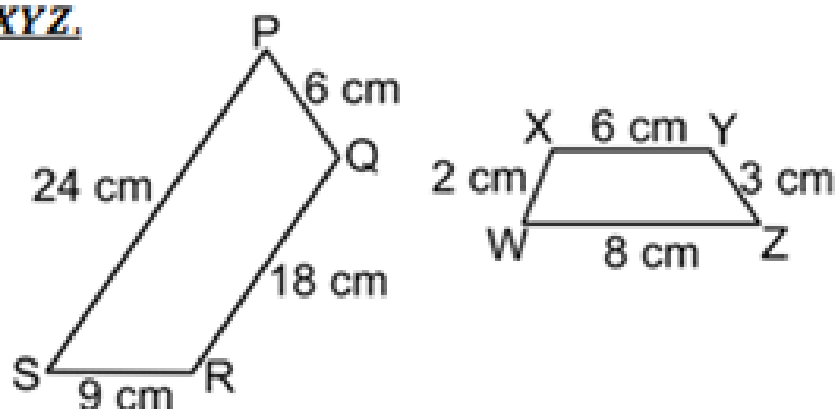


B) Are the two figures similar? If yes, what is the scale factor? If no, explain why they are not similar.

Scale Factor = _____

6) Determine if the figures are similar or not.

A) Find the ratio of each corresponding side from PQRS to WXYZ.



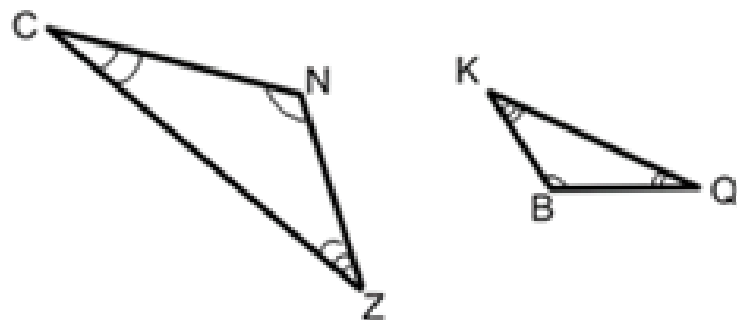
B) Are the two figures similar? If yes, what is the scale factor? If no, explain why they are not similar.

Scale Factor = _____

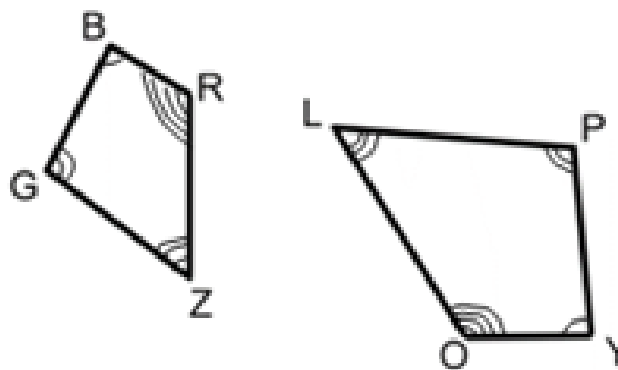
7) Write the similarity statements for the following similar figures. Redraw the figures in the same orientation to help you write the statement.

Example of Similarity Statement $\rightarrow AEPO \sim GZXL$

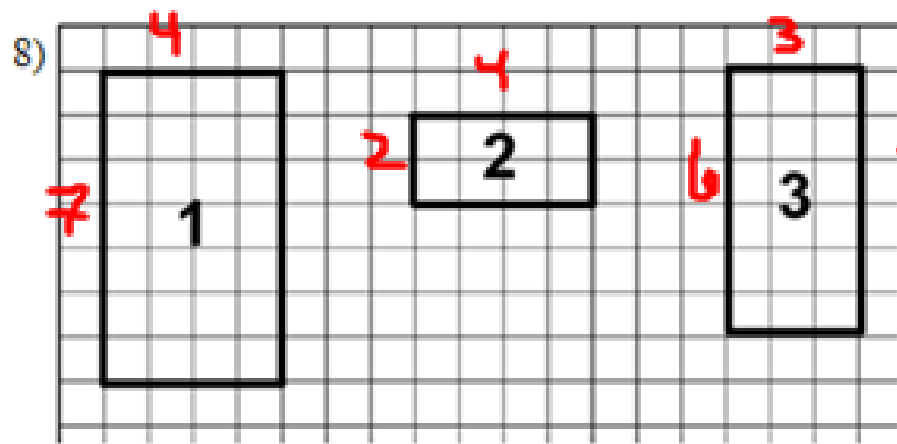
A) $\triangle CNZ \sim \triangle QBK$



B) _____ \sim _____



Two of the following three figures are similar to one another. Determine which two figures are similar and what the scale factor is.



1 to 2
 $\frac{7}{2} = \frac{4}{4}$
 $\frac{7}{2} \neq 1$

SHOW YOUR WORK!

2 to 3
 $\frac{2}{6} = \frac{4}{3}$
 $\frac{1}{3} \neq \frac{4}{3}$

1 to 3
 $\frac{7}{6} = \frac{4}{3}$
 $\frac{7}{6} = \frac{4}{3}$

Similarity Statement

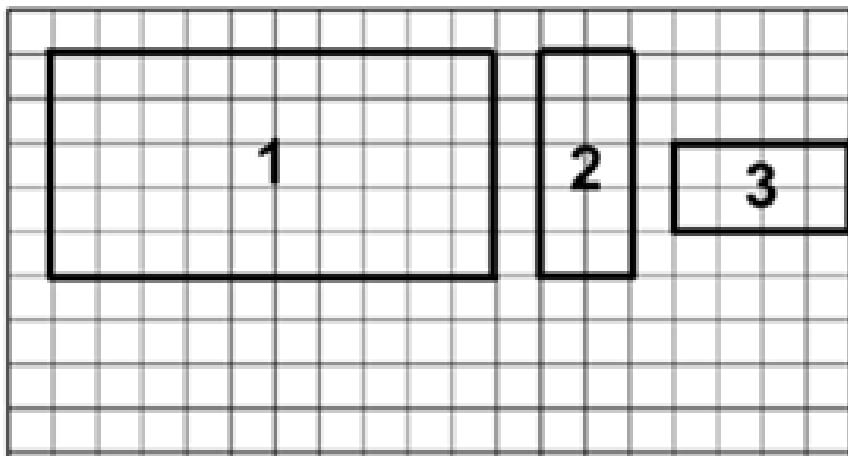
A) Figure 2 ~ Figure 3

B) Scale factor going from Figure 2 to Figure 3

C) Scale Factor = $\frac{2}{3}$

Fig 3 \rightarrow Figure 2
 $\frac{2}{3}$

9)



SHOW YOUR WORK!

Similarity Statement

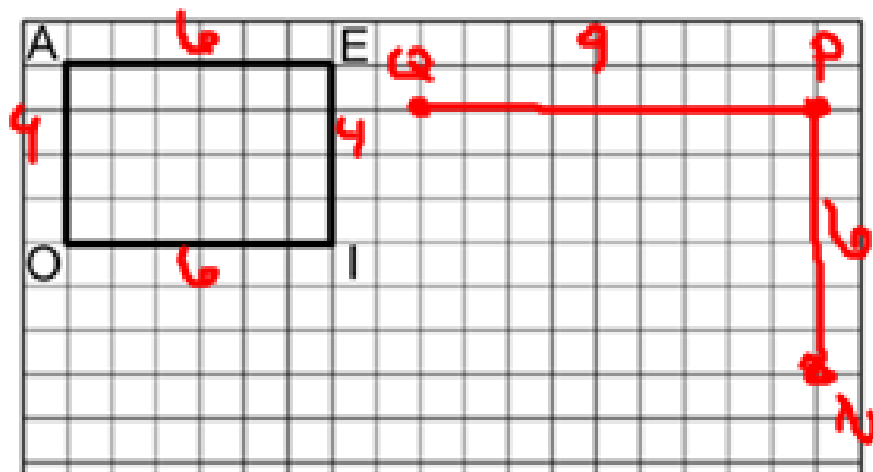
A) Figure _____ \sim Figure _____

B) Scale factor going from Figure _____ to Figure _____

C) Scale Factor = _____

10) Rectangle $AEIO$ is enlarged by a scale factor to $\frac{3}{2}$ (3 to 2) to make the new figure of Rectangle $QPNR$.

Use the scale factor given to draw the new figure.
Label the new figure.



A) Determine the corresponding sides of the two figures.

$$\frac{QP}{AE}, \frac{PN}{EI}, \frac{NR}{IO}, \frac{RQ}{OA}$$

B) Find how many units long each of the new sides will be, using the corresponding sides. **Show work!**

$$\begin{aligned} AE &\sim QP & EI &\sim PN \\ 3 & \cdot \frac{3}{2} = 9 & 4 & \cdot \frac{3}{2} = 6 \end{aligned}$$

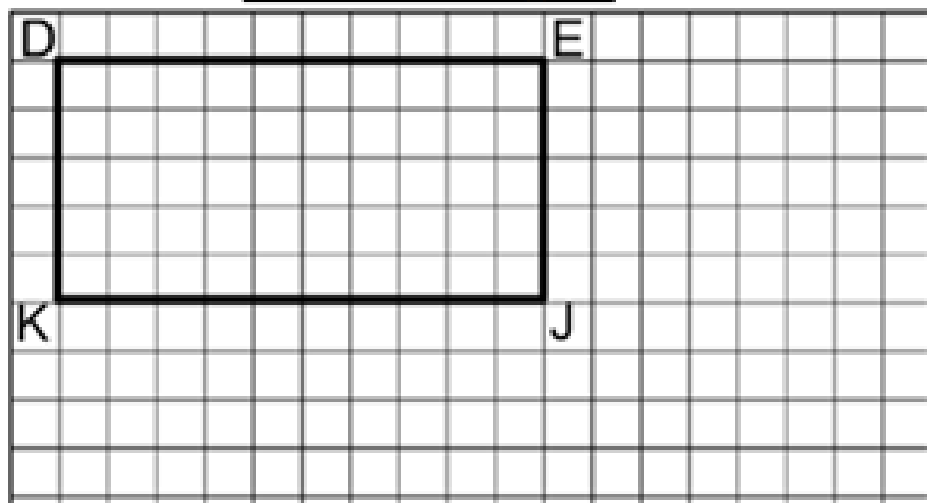
Side $QP = 9$ Side $PN = 6$

Side $NR = \underline{\hspace{2cm}}$ Side $QR = \underline{\hspace{2cm}}$

11) Rectangle $DEJK$ is enlarged by a scale factor to $\frac{1}{5}$ (1 to 5) to make the new figure of Rectangle $AXWH$.

Use the scale factor given to draw the new figure.

Label the new figure.



A) Determine the corresponding sides of the two figures.

_____ , _____ , _____ , _____
□ □ □ □

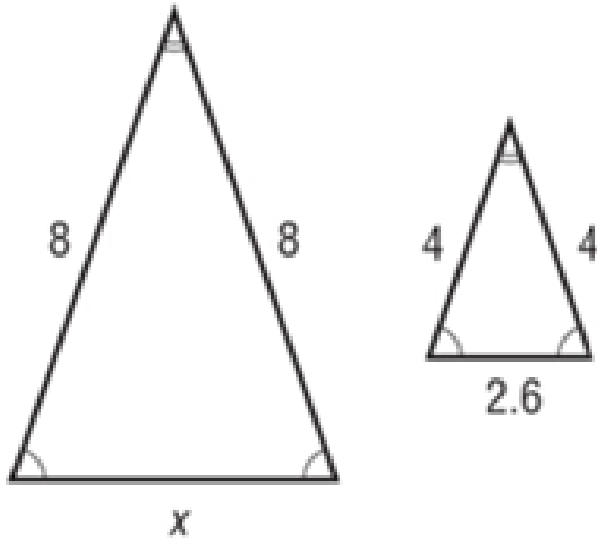
B) Find how many units long each of the new sides will be, using the corresponding sides. **Show work!**

Side AX = _____ Side XW = _____

Side WH = _____ Side AH = _____

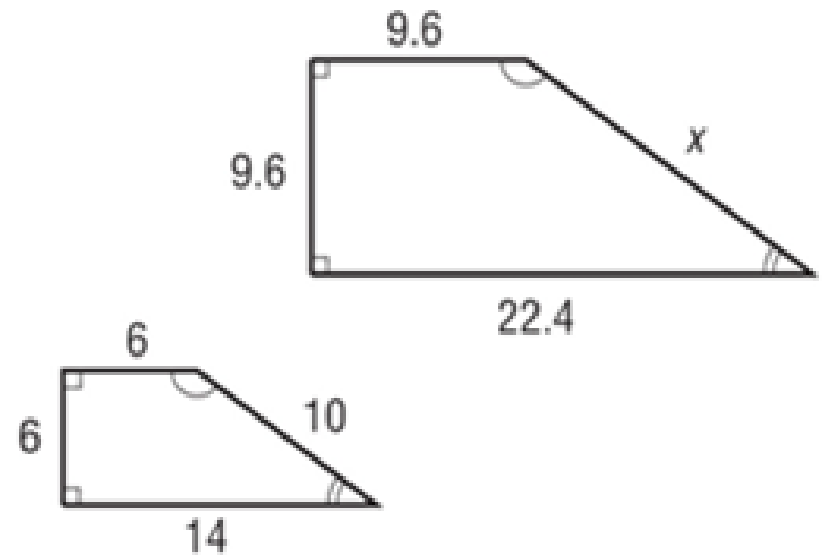
12) Each pair of polygons is similar. Find each missing side measure. SHOW WORK

A)



$x =$ _____

B)



$x =$ _____