

REVIEW SIMILAR POLYGONS

WRITE EACH RATIO IN SIMPLEST TERMS.

1) $\frac{54}{81}$ _____

2) $180 : 135$ _____

3) $30 : 45 : 60$ _____

IDENTIFY THE MEANS AND EXTREMES, THEN SOLVE FOR x .

5) Means _____

6) Means _____

7) Means _____

Extremes _____

Extremes _____

Extremes _____

$x =$ _____

$x =$ _____

$x =$ _____

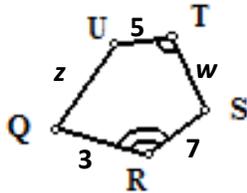
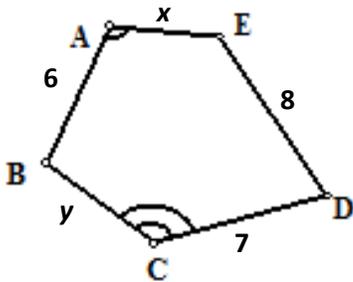
$\frac{4}{9} = \frac{x}{54}$

$8 : x = 12 : 20$

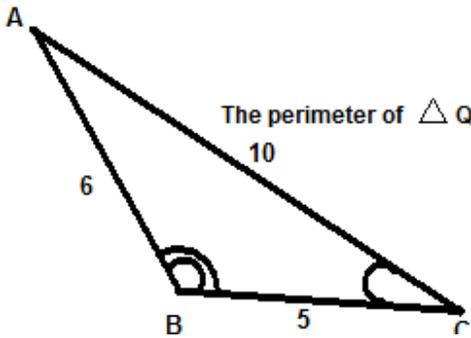
$\frac{2}{9} = \frac{x+2}{21}$

WRITE THE SIMILARITY STATEMENT, GIVE THE SCALE FACTOR, AND FIND THE MISSING VALUES FOR EACH FIGURE.

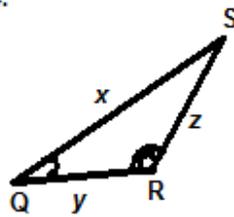
8) Pent. ABCDE ~ Pent. _____, Scale Factor = _____, $w =$ _____, $x =$ _____, $y =$ _____, $z =$ _____.



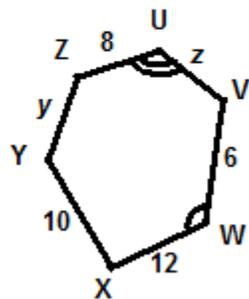
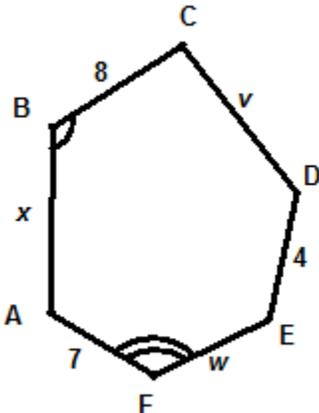
9) $\triangle ABC \sim \triangle$ _____, Scale Factor = _____, $x =$ _____, $y =$ _____, $z =$ _____.



The perimeter of $\triangle QRS$ is 14.



10) Hexagon ABCDEF ~ Hexagon _____, $v =$ _____, $w =$ _____, $x =$ _____, $y =$ _____, $z =$ _____.

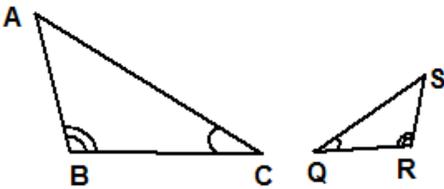


- 11) The ratio of the measures of two supplementary angles is 2 to 7. Find the measure of each angle.
- 12) The measures of the angles of a triangle are in the ratio 1:2:3. Find the measure of each angle.
- 13) The perimeter of a pentagon is 58 cm. One side of the pentagon is 8 cm. The other four sides are in the ratio 1:2:3:4. Find the lengths of the other four sides.
- 14) The ratio of the measures of two complementary angles is 3:2. Find the measure of each angle.

DECIDE IF ENOUGH INFORMATION IS GIVEN FOR THE TWO TRIANGLES TO BE SIMILAR. IF NOT, WRITE "NEI". IF THERE IS ENOUGH INFORMATION, STATE THE METHOD THAT JUSTIFIES THEIR SIMILARITY.

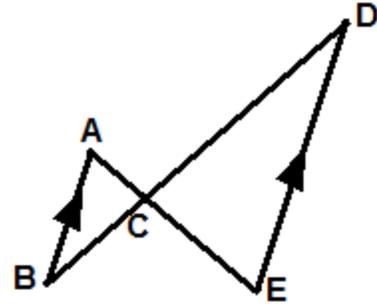
15) Why? _____

$\triangle ABC \sim \triangle$ _____



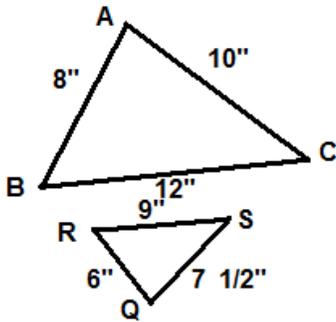
16) Why? _____

$\triangle ABC \sim \triangle$ _____



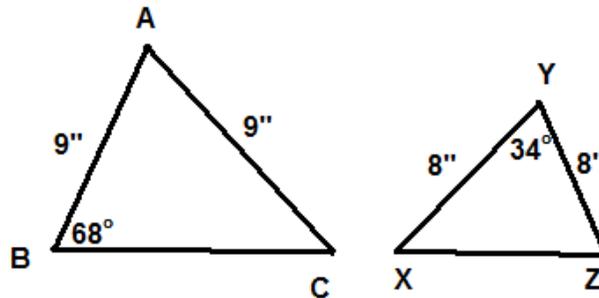
17) Why? _____

$\triangle ABC \sim \triangle$ _____

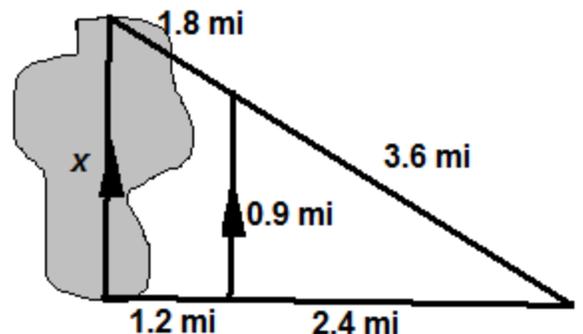


18) Why? _____

$\triangle ABC \sim \triangle$ _____

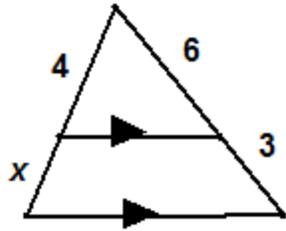


- 19) A flag pole casts a shadow of 34 ft. A yard stick near the flag pole casts a shadow of 6 ft. Find the height of the pole.
- 20) A tree casts a shadow of 65 m. A woman near the tree casts a shadow of 1.5 m. The woman is 1.35 m tall. How tall is the tree?
- 21) Find the distance across the lake.

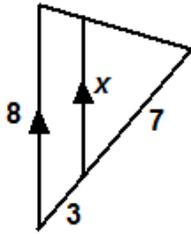


FIND THE VALUE FOR x IN EACH PROBLEM.

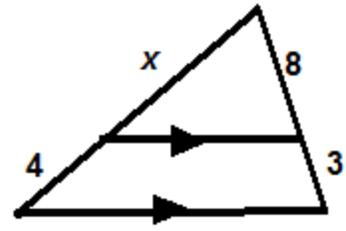
22) $x = \underline{\hspace{2cm}}$



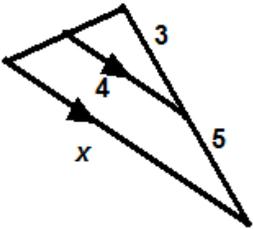
23) $x = \underline{\hspace{2cm}}$



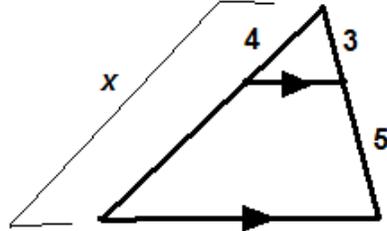
24) $x = \underline{\hspace{2cm}}$



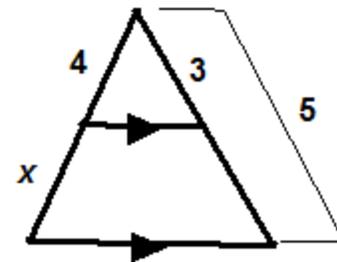
25) $x = \underline{\hspace{2cm}}$



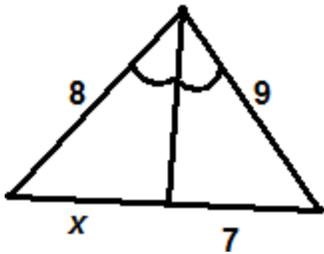
26) $x = \underline{\hspace{2cm}}$



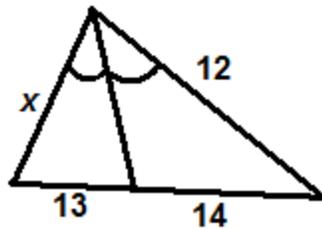
27) $x = \underline{\hspace{2cm}}$



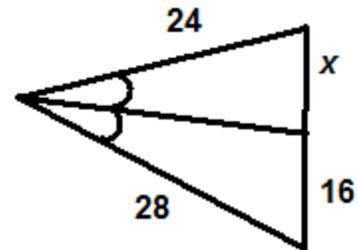
28) $x = \underline{\hspace{2cm}}$



29) $x = \underline{\hspace{2cm}}$



30) $x = \underline{\hspace{2cm}}$



- 31) List 4 items of two similar triangles that have the same ratio as a pair of corresponding sides.
 1)
 2)
 3)
 4)

32) Find 56 % of 42.

33) Find 84 % of 92.

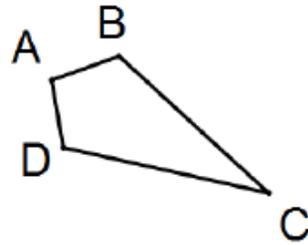
34) 36 is what % of 98?

35) 48 is 60 % of what number?

36) If a shirt is on sale for 30 % off the original price of \$25.95, what is the price of the shirt to the nearest penny?

37) If a CD player sales for \$ 89.99 and the tax rate is 8 %, how much will it cost to buy the CD player?

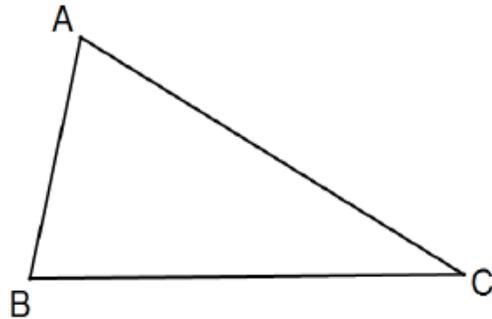
38) Dilate the following quadrilateral by a scale factor of 3 with center of dilation X.



39) Given the coordinates of triangle ABC are $A(3, -2)$, $B(4, 1)$, and $C(-8, 3)$, using a scale factor of $\frac{2}{3}$, state the coordinates of A' , B' , and C'

X

40) Dilate the Triangle ABC with a scale factor of $\frac{1}{2}$.



41) With a center of dilation at $(-2, 3)$, graph the image of Triangle ABC using a scale factor of 2. State the coordinates of A' , B' and C' .

