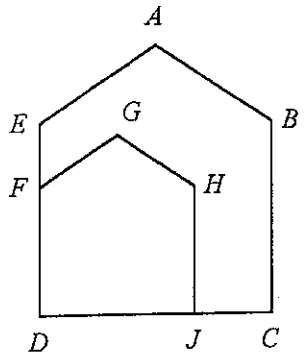
Name: Key Class: _____ Date: _____ ID: B

Quiz 6.1-6.2 REVIEW

1. $\overset{\frown}{ABCDE} \sim \overset{\frown}{GHJDF}$. Complete the statements.



a. $\angle H \cong$ ■ ∠B

b. $\frac{GH}{DJ} = \frac{AB}{■}$ CD

2. The measures of the angles of a triangle are in the extended ratio 2 : 4 : 6. What is the measure of the smallest angle? $2x+4x+6x=180$ $\frac{12x}{12}=\frac{180}{12}$ $x=15$ $2(15)=$ 30°

What is the solution of each proportion?

3. $\frac{7}{a} \times \frac{14}{16}$ $14a=7(16)$ $\frac{14a}{14}=\frac{112}{14}$ $a=8$

4. $\frac{(3y-8)}{12} \times \frac{y}{5}$ $5(3y-8)=12y$ $15y-40=12y$ $-15y \quad -15y$ $-40=-3y$ $13.3=y$

5. A salsa recipe uses green pepper, onion, and tomato in the extended ratio 1 : 3 : 4. How many cups of onion are needed to make 16 cups of salsa? $1x+3x+4x=16$ $\frac{8x}{8}=\frac{16}{8}$ $x=2$ $3(2)=$ 6 cups

6. In a diagram of a landscape plan, the scale is 1 cm = 10 ft. In the diagram, the trees are 3.4 centimeters apart. How far apart should the actual trees be planted? $\frac{1\text{ cm}}{10\text{ ft}}=\frac{3.4\text{ cm}}{x\text{ ft}}$ $x=3.4(10)=$ 34 ft

7. The ratio of length to width in a rectangle is 3 to 1. If the perimeter of the rectangle is 32 feet, what is the length of the rectangle?

$3x+1x+3x+1x=32$

$\frac{8x}{8}=\frac{32}{8}$

$x=4$

$3(4)=$ 12 ft

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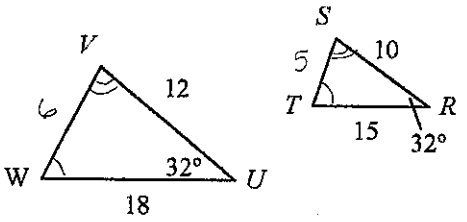
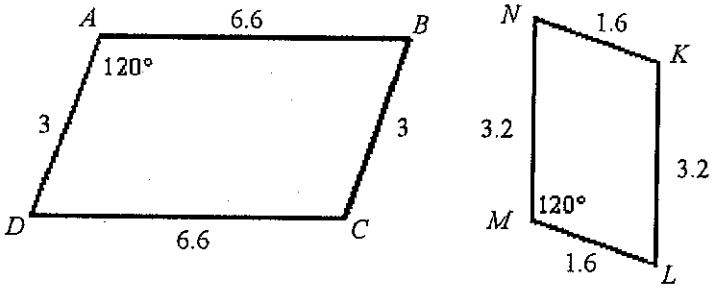
Are the polygons similar? If they are, write a similarity statement and give the scale factor.



Not drawn to scale.

8. $\frac{6}{5} = \frac{12}{10} = \frac{18}{15}$ ✓ Yes $\triangle VUW \sim \triangle SRT$

9.



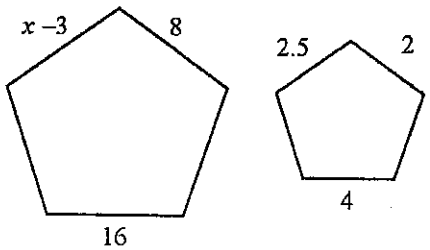
$\frac{6.6}{3.2} = \frac{1.6}{3}$ No!

Not drawn to scale.

10. A model is made of a car. The car is 8 feet long and the model is 6 inches long. What is the ratio of the length of the car to the length of the model? $8ft \cdot (12) = 96in$ $\frac{96in}{6in} = \frac{16in}{1in}$

The polygons are similar, but not necessarily drawn to scale. Find the value of *x*.

11.



$\frac{x-3}{2.5} = \frac{8}{2}$

$2(x-3) = 8(2.5)$

$2x - 6 = 20$

$+6 \quad +6$

$\frac{2x}{2} = \frac{26}{2}$

$x = 13$