Geometry Name:_____

Assignment 6.2

1. A _____ is a comparison of two quantities.

2. A _____ is the equality of two ratios.

3. To solve a proportion you need to _____.

4. A proportion can be made easier to solve by _____ the ratios**.**

5. The <u>perimeter</u> of a rectangle is 84 feet. The ratio of the width to the length is 2:5. Find the length and the width.

6. The <u>area</u> of a rectangle is $108\,\text{cm}^2$. The ratio of the width to the length is 3:4. Find the length and the width.

7. The measures of the angles in a triangle are in the extended ratio of 2:15:19. Find the measures of the angles.

8. The measures of the angle is a triangle are in the extended ratio of 1:4:7. Find the measures of the angles.

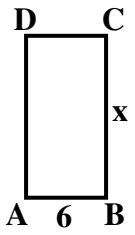
9. $\frac{4}{5} = \frac{x}{15}$

10. $\frac{y+2}{4} = \frac{27}{12}$

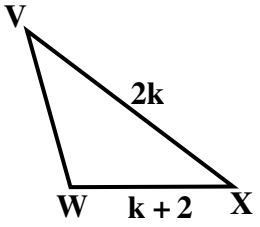
11. $\frac{2}{k-1} = \frac{5}{3k-4}$

The ratio of two side lengths is given. Solve for the variable.

12. AB:BC is 3:8

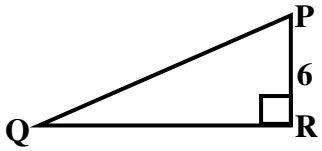


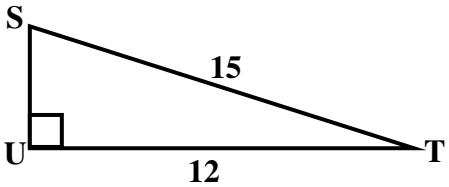
13. WX:XV is 5:7



14. Two gears, Gear A and Gear B, have a gear ratio of 2:3. If Gear A has 24 teeth, then how many teeth does Gear B have?

15. The ratios of the side lengths of ΔPQR to the corresponding side lengths of ΔSTU are 2:3. Find the unknown side lengths.

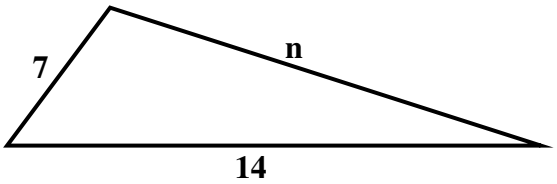




16. Determine if a triangle can be constructed with the given side lengths.

2 ft., 5 ft., 2 ft.

17. In the figure below, n is a whole number. What is the largest possible value for n?



Answer Key:

1) ratio **2)** proportion **3)** cross multiplying **4)** simplifying **5)** w = 12 ft, $\ell = 30$ ft **6)** w = 9 cm, $\ell = 12$ cm

7) 10°, 75°, 95° **8)** 15°, 60°, 105° **9)** x= 12 **10)** y = 7 **11)** k = 3 **12)** x = 16 **13)** k = $4\frac{2}{3}$

14) 36 teeth **15)** SU = 9, QR = 8, PQ = 10 **16)** No **17)** 20