

Name: \_\_\_\_\_

Geometry

Date: \_\_\_\_\_ Period: \_\_\_\_\_

Chapter 7: Similarity

7.1-7.2 Quiz Review

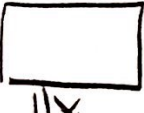
1. Write a ratio in simplest form for the following: 30 treadmills to 36 elliptical.

$$\frac{30}{36} \rightarrow \frac{5}{6}$$

2. The ratio of the measures of two supplementary angles is 5:7. What is the measure of each angle?

$$\begin{aligned} 5x + 7x &= 180 & 5(15) &= 75^\circ \\ 12x &= 180 & 7(15) &= 105^\circ \\ x &= 15 \end{aligned}$$

3. The sides of a rectangle are in a ratio of 3:11. If the perimeter is 56 yds, find the dimensions of the rectangle.

3x   $11x$


$$\begin{aligned} 3x + 11x + 3x + 11x &= 56 \\ 28x &= 56 \\ x &= 2 \end{aligned}$$

$3(2) = 6$   
 $11(2) = 22$  6 yd by 22 yd

4. The ratio of the sides of a triangle are in a ratio of 6:7:9. If the perimeter of the triangle is 88 cm, what is the length of the medium side?

$$\begin{aligned} 6x + 7x + 9x &= 88 \\ 22x &= 88 \\ x &= 4 \\ 7(4) &= 28 \text{ cm} \end{aligned}$$

5. The ratio of the measures of the vertex angle to the base angle of an isosceles triangle is 8:5. Find the measure of the base angle.

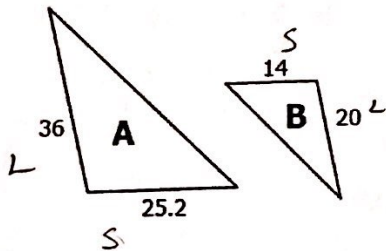


$$\begin{aligned} 8x + 5x + 5x &= 180 \\ 18x &= 180 \\ x &= 10 \\ 5(10) &= 50^\circ \end{aligned}$$

6. If  $\triangle ABC \sim \triangle GHK$  complete the following.

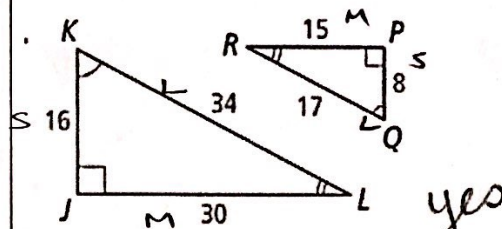
- $\angle A \cong \angle G$
- $\frac{CB}{KH} = \frac{AC}{GK}$

7. Give the scale factor of Figure A to Figure B.



$$\frac{36}{14} \rightarrow \frac{9}{5} \quad 9:5$$

8. Determine if the figures are similar. If so, write a similarity statement and give the scale factor.

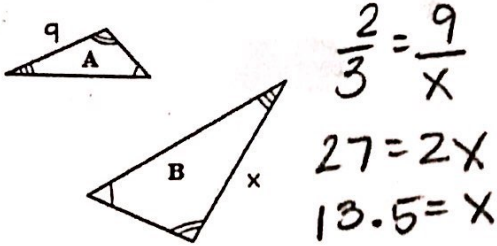


$$\frac{16}{8} = \frac{30}{15} = \frac{34}{17}$$

$$\frac{2}{1} = \frac{2}{1} = \frac{2}{1}$$

yes  
2:1

9. Figure A is similar to Figure B with a scale factor of 2:3. Find the value of x.

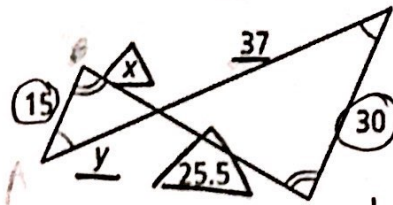


$$\frac{2}{3} = \frac{9}{x}$$

$$27 = 2x$$

$$13.5 = x$$

10. If  $\triangle ABC \sim \triangle GHK$ , find the values of x and y.



$$\frac{15}{30} = \frac{y}{37} = \frac{x}{25.5}$$

$$\frac{15}{30} = \frac{x}{25.5}$$

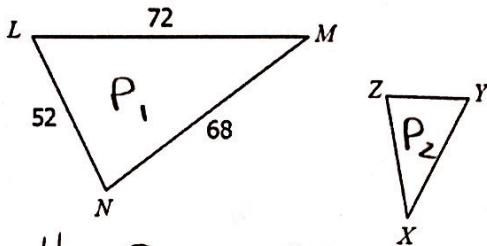
$$30y = 555$$

$$y = 18.5$$

$$30x = 382.5$$

$$x = 12.75$$

11. If  $\triangle LMN \sim \triangle YXZ$  with a scale factor of 4:3 find the perimeter of  $\triangle YXZ$ .

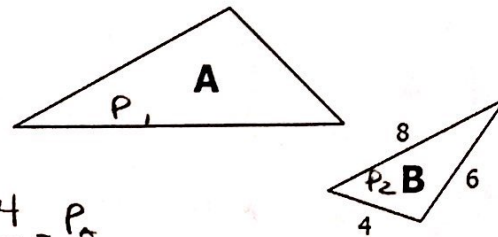


$$\frac{4}{3} = \frac{P_1}{P_2} \rightarrow \frac{192}{x}$$

$$576 = 4x$$

$$144 = x$$

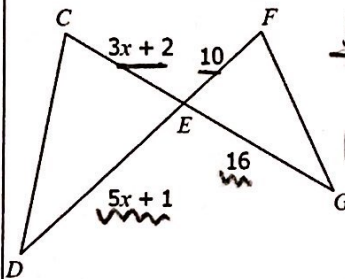
12. If Figure A is similar to Figure B with a scale factor of 4:1, find the perimeter of Figure A.



$$\frac{4}{1} = \frac{P_1}{P_2}$$

$$\frac{4}{1} = \frac{x}{18} \rightarrow x = 72$$

13. If  $\triangle CDE \sim \triangle FGE$ , find DE.



$$\frac{3x+2}{10} = \frac{5x+1}{16}$$

$$10(5x+1) = 16(3x+2)$$

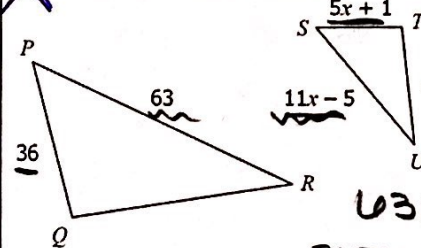
$$50x+10 = 48x+32$$

$$2x = 22$$

$$x = 11$$

$$DE = 5(11) + 1 = 56$$

14. If  $\triangle PQR \sim \triangle STU$ , find ST.



$$\frac{36}{5x+1} = \frac{11x-5}{36}$$

$$63(5x+1) = 36(11x-5)$$

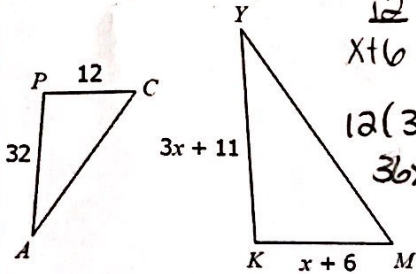
$$315x+63 = 396x-180$$

$$243 = 81x$$

$$3 = x$$

$$ST = 5(3) + 1 = 16$$

15. If  $\triangle APC \sim \triangle YKM$ , find KM.



$$\frac{12}{x+6} = \frac{32}{3x+11}$$

$$12(3x+11) = 32(x+6)$$

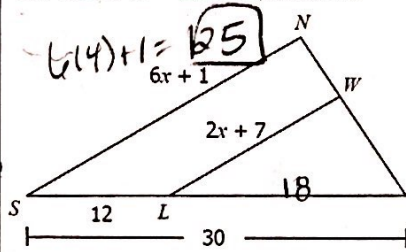
$$36x+132 = 32x+192$$

$$4x = 60$$

$$x = 15$$

$$15+6 = 21$$

16. If  $\triangle SND \sim \triangle LWD$ , find SN.



$$\frac{18}{30} = \frac{2x+7}{6x+1}$$

$$30(2x+7) = 18(6x+1)$$

$$60x+210 = 108x+18$$

$$192 = 48x$$

$$4 = x$$