

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

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

# Homework #9

Due THURSDAY, December 14<sup>th</sup>

**Solve the following using proportions.**

1. Carol spends 17 hours in a 2-week period practicing her culinary skills. How many hours does she practice in 5 weeks?

2. In the typing world, 80 words per minute is considered acceptable. How many words per 30 minutes is this?

3. A doctor sees each of her patients for 25 minutes during a typical appointment. How many patients can she see in a typical 2 1/7 hour day?

4. If a trip between work and home takes 15 minutes each way, how much time will be spent in a 5-day work week traveling back and forth to work? (Assume that at no point does the employee have to go home and come back within the same day.)

5. In a shipment of 400 parts, 14 are found to be defective. How many defective parts should be expected in a shipment of 1000?

6. A piece of cable 8.5 cm long weighs 52 grams. What will a 10-cm length of the same cable weigh?

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7. Guests at a pizza party are seated at three tables. The small table has 5 seats and 2 pizzas. The medium table has 7 seats and 3 pizzas. The large table has 12 seats and 5 pizzas. The pizzas at each table are shared equally. At which table does a guest get the most pizza?

8. Suppose a news story about the Super Bowl claims “Men outnumbered women in the stadium by a ratio of 9 to 5.” Haru thinks that this means there were 14 people in the stadium-9 men and 5 women. Do you agree with Haru? Why or whynot?

9. **Multiple Choice:** Which of the following is a correct interpretation of the statement “Men outnumbered women by a ratio of 9 to 5?”

- A. There were four more men than women.
- B. The number of men was 1.8 times the number of women.
- C. The number of men divided by the number of women was equal to the quotient of  $5 \div 9$ .
- D. In the stadium, five out of nine fans were women.

10. Ryan took 15 minutes to type his 450-word report. At this rate, how many words could he type in 20 minutes? Show how you arrived at your answer.

11. Two of these proportions correctly represent how to solve the problem above. Circle the two that are correct and explain how you came to your answer.

$$\frac{450}{15} = \frac{x}{20}$$

$$\frac{x}{450} = \frac{15}{20}$$

$$\frac{20}{15} = \frac{450}{x}$$

$$\frac{20}{x} = \frac{15}{450}$$

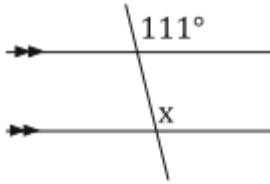
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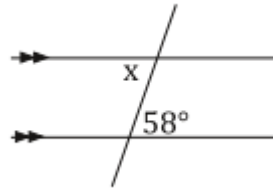
**SPIRAL REVIEW: There problems are required! This will help you remember past content, so that we can use it later on this year!**

14. Figure out the value or x in the given diagrams.

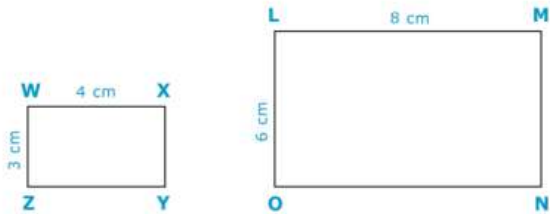
a.



b.

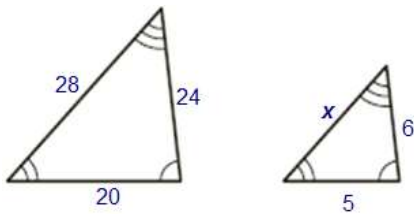


15. Scaling up! What is the scale factor from WXYZ to LMNO?

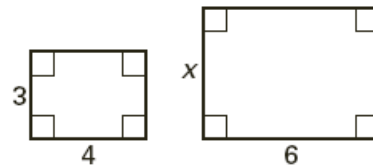


16. Find the value of x. for the given similar figures.

a.



b.



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17. Determine if the following side lengths create a triangle or not and justify your reasoning.

A. 4cm, 7cm, 7cm

B. 1m, 2m, 5m

C. 3ft, 12ft, 19ft

D. 121in, 200in, 98in

**CHALLENGE: Write an equation for each of the following statements.**

12. When a number is multiplied by six and the product is decreased by nine, the final result is thirty-three. Write an equation that represents this statement.

13. The quotient of a number squared and seven is twenty-five. Write an equation that represents this statement.