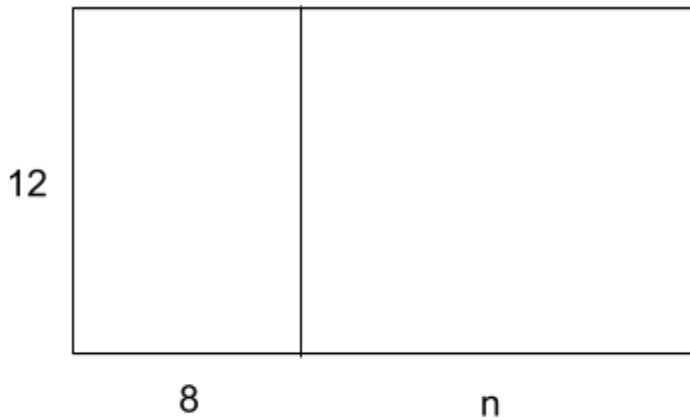Prime Time Review

1. Find the prime factorization of 90. Write the prime factorization in **expanded** and **exponential** form.

2. Find the prime factorization of 108. Write the prime factorization in **expanded** and **exponential** form.

3. What is the **greatest common factor** of 90 and 108? Show work.

4. What is the **least common multiple** of 90 and 108? Show work.

5. What is another **common multiple** of 90 and 108?

6. What number has the prime factorization $2^3 \times 5^3 \times 11$?

7. Find the value of the expression $10 - (8 \div 2) + 5^2$. Show all steps.

8. Write **two expressions** which could be used to determine the area of the following figure.

9. A bookstore is giving prizes out for its grand opening. Every 12th customer receives a gift card, while every 15th customer receives a free book. Which customer will be the first customer to get both the gift card and the free book?

10. Maria is making chocolate chip and M&M cookies. She wants every cookie to have the same amount of chocolate chips and M&Ms with no leftovers. Maria has 120 chocolate chips and 72 M&Ms. What is the greatest number of cookies Maria can make? How many chocolate chips and M&Ms will be on each cookie?

11. How can you tell if the sum of two numbers will be even or odd?

12. How can you tell if the product of two numbers will be even or odd?