

Unit 1: Factors and Multiples

ADVANCED · SET 2

Name: _____ Date: _____

Solve each problem and write your short exact answer on the line provided. Show your reasoning on scratch paper.

1. Find the greatest common factor (GCF) of 36 and 48.

Answer: _____

2. Find the least common multiple (LCM) of 8 and 12.

Answer: _____

3. How many factors does 48 have in total?

Answer: _____

4. A rectangle has an area of 84 square units and whole-number side lengths. How many different rectangles (counting $a \times b$ and $b \times a$ as the same) are possible?

Answer: _____

5. Find the sum of all the prime numbers that are greater than 20 and less than 40.

Answer: _____

6. What is the largest prime number that is less than 50?

Answer: _____

7. The prime factorization of 90 can be written as $2 \times 3^a \times 5$. What is the value of a ?

Answer: _____

8. Is 91 a prime number or a composite number? Answer 'prime' or 'composite'.

Answer: _____

9. A whole number has exactly these factors: 1, 2, 4, 5, 10, and 20. What is the number?

Answer: _____

10. Two numbers have a GCF of 6 and an LCM of 72. If one of the numbers is 24, what is the other number?

Answer: _____

11. What is the sum of all the factors of 28 (including 1 and 28)?

Answer: _____

12. How many multiples of 7 are there between 1 and 100 (inclusive)?

Answer: _____