

Unit 1: Factors and Multiples

ADVANCED

Name: _____ Date: _____

Show all work where needed. Write each final answer on the line provided. Use whole numbers unless told otherwise.

1. Find the greatest common factor (GCF) of 84 and 126.

Answer: _____

2. What is the smallest whole number greater than 0 that is a multiple of both 12 and 18?

Answer: _____

3. Add up all of the factors of 48 (including 1 and 48). What is the sum?

Answer: _____

4. How many different factors does the number 72 have in all?

Answer: _____

5. A rectangle has an area of 96 square centimeters and whole-number side lengths. Counting a rectangle that is a by b the same as one that is b by a , how many different rectangles are possible?

Answer: _____

6. What is the largest prime number that is less than 60?

Answer: _____

7. Is 143 a prime number or a composite number?

Answer: _____

8. What is the smallest whole number greater than 1 that is a common multiple of 4, 6, and 8?

Answer: _____

9. How many numbers are factors of both 40 and 60 (that is, how many common factors do they share)?

Answer: _____

10. Find the greatest common factor (GCF) of 90 and 135.

Answer: _____

11. How many prime numbers are there between 20 and 40 (not counting 20 or 40)?

Answer: _____

12. The prime factorization of 200 is $2^3 \times 5^2$. In this factorization, what is the exponent on the 2?

Answer: _____