Worksheet 3: Factors, Products, Prime and Composite Numbers - Grade 9

Name: _____ **Date:** _____

Class: _____

Section A: Vocabulary Check

Instructions: Match each term to its correct definition by writing the correct letter on the line.

Terms

1. _____ Factor
2. _____ Product
3. _____ Prime Number
4. _____ Composite Number
5. _____ Prime Factors

Definitions

A. A whole number greater than 1 with more than two factors.
B. The factors of a number that are prime.
C. A number that divides evenly into another number.
D. The result of multiplying numbers together.
E. A whole number greater than 1 with exactly two factors: 1 and itself.

Section B: True or False?

Instructions: Read each statement carefully. Write **T** if the statement is true or **F** if it is false.

6. _____ The number 1 is a prime number.
7. _____ A composite number must have at least three factors.
8. _____ The numbers 2, 3, and 5 are all prime numbers.
9. _____ The number 21 is composite because it has factors other than 1 and itself.
10. _____ The prime factors of 10 are 2 and 5.

Section C: Skill Application

Instructions: Answer each question in the space provided.

11. List all the factors of 24.

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12. Is the number 31 prime or composite? Explain how you know.

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13. Find the prime factorization of 36. Show your work below.
    Prime Factorization: _____
14. Find the common factors of 18 and 27.
    - Factors of 18: _____
    - Factors of 27: _____
    - Common Factors: _____

Section D: Problem Solving

Instructions: Read the real-world situation below and answer the questions that follow.

A coach is organizing a relay race. She has 48 students who need to be divided into equal-sized teams with more than 1 student per team.

15. List all the possible team sizes she can use.

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16. The coach wants the largest possible team size. How many students should be on each team?

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17. If she decides to have 6 students on each team, how many teams will there be? Show your work.
