

PRACTICE WORKSHEET 1: FACTORS | CLASS 5 MATHEMATICS

Multiple Choice Questions (5)

- Which of the following is a prime number?
 - 15
 - 19
 - 21
 - 25
- What is the divisibility rule for 5?
 - The number must end in 0 or 5
 - The number must be even
 - The number must end in 0
 - The sum of the digits must be divisible by 5
- A composite number:
 - Has only one factor
 - Has exactly two factors
 - Has more than two factors
 - Is divisible only by itself
- What is the HCF of 12 and 18?
 - 6
 - 12
 - 3
 - 9
- The prime factorization of 36 is:
 - 2×18
 - $2^2 \times 3^2$
 - 3×12
 - $2 \times 2 \times 3$

Fill in the Blanks (5)

- A number divisible by 2 is always _____.
 - The smallest prime number is _____.
 - The HCF of 20 and 30 is _____.
 - A number ending in 0 is divisible by _____.
 - Prime factorization involves breaking a number into its _____ factors.
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True or False Questions (5)

1. Every even number is a prime number.
 2. The number 1 is neither prime nor composite.
 3. The rule of divisibility for 3 involves checking the sum of the digits.
 4. The HCF of two numbers is always smaller than or equal to the smallest number.
 5. 49 is a composite number.
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Direct Numeric (5)

1. Find the prime factors of 48.
 2. Calculate the HCF of 16 and 24 using prime factorization.
 3. Write 2^5 in expanded form.
 4. Find the HCF of 14 and 35 using the listing method.
 5. What is the prime factorization of 100?
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Word Problems (5)

1. A gardener has 24 roses and 36 lilies. He wants to divide them into identical groups such that each group has the same number of roses and lilies. What is the largest number of groups he can form?
 2. A baker has 40 cupcakes and 60 cookies. She wants to pack them into boxes so that each box has the same number of cupcakes and cookies. What is the maximum number of boxes she can use?
 3. If a number is divisible by both 3 and 4, is it also divisible by 12? Explain.
 4. Two friends have 54 and 72 stamps, respectively. They want to arrange their stamps in groups of equal numbers. What is the largest number of stamps each group can have?
 5. Write the prime factorization of 90 and verify it by multiplication.
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Answer Key with Explanations

Multiple Choice Questions

1. b) 19 (19 is only divisible by 1 and itself, so it's prime.)
2. a) The number must end in 0 or 5 (This is the rule for divisibility by 5.)
3. c) Has more than two factors (Composite numbers have more than two factors.)
4. a) 6 (Factors common to both are 1, 2, 3, and 6. Highest is 6.)
5. b) $2^2 \times 3^2$ (Prime factors of 36 are 2 and 3, raised to powers.)

Fill in the Blanks

1. Even
2. 2
3. 10
4. 10
5. Prime

True or False

1. False (Only some even numbers are prime.)
2. True (1 is not classified as prime or composite.)
3. True (This is the rule of divisibility for 3.)
4. True (HCF cannot exceed the smaller number.)
5. True (49 has factors 1, 7, and 49.)

Direct Numeric

1. $2^4 \times 3$
2. $\text{HCF} = 2^3 = 8$
3. $2 \times 2 \times 2 \times 2 \times 2 = 32$
4. $\text{HCF} = 7$
5. $2^2 \times 5^2$

Word Problems

1. 12 groups (HCF of 24 and 36 is 12.)
2. 20 boxes (HCF of 40 and 60 is 20.)
3. Yes, divisible (A number divisible by both 3 and 4 is divisible by their LCM, which is 12.)
4. 18 stamps (HCF of 54 and 72 is 18.)
5. $90 = 2 \times 3^2 \times 5$