

PRACTICE WORKSHEET 2: FACTORS | CLASS 5 MATHEMATICS

Multiple Choice Questions (5)

- Which of the following is a composite number?
 - 13
 - 17
 - 20
 - 23
- Which of the following numbers is divisible by 3?
 - 25
 - 27
 - 29
 - 31
- What is the prime factorization of 50?
 - 5×10
 - 2×25
 - 2×5^2
 - $2^2 \times 5^2$
- What is the smallest number divisible by both 4 and 6?
 - 10
 - 12
 - 18
 - 24
- What is the HCF of 24 and 36?
 - 4
 - 6
 - 12
 - 18

Fill in the Blanks (5)

- A number is divisible by 9 if the sum of its digits is divisible by _____.
 - A _____ number has exactly two factors.
 - The prime factorization of 64 is _____.
 - The HCF of two numbers is their greatest _____ factor.
 - The divisibility rule for 10 states that a number must end in _____.
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True or False Questions (5)

1. The number 2 is the only even prime number.
 2. The HCF of 8 and 12 is 24.
 3. A number divisible by 4 is also divisible by 2.
 4. Every number greater than 1 is either prime or composite.
 5. $2^3 \times 5^2$ is the prime factorization of 200.
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Direct Numeric (5)

1. Find the prime factors of 72.
 2. Calculate the HCF of 18 and 27 using prime factorization.
 3. Write 10^4 .
 4. What is the HCF of 45 and 60 using the listing method?
 5. Determine the prime factorization of 84.
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Word Problems (5)

1. A farmer has 32 mangoes and 48 apples. He wants to pack them in baskets so that each basket has the same number of mangoes and apples. What is the largest number of baskets he can prepare?
 2. A teacher has 90 pencils and 120 erasers. She wants to distribute them equally among students. What is the maximum number of students she can distribute them to?
 3. If a number is divisible by both 2 and 5, is it also divisible by 10? Explain.
 4. Two friends have 36 and 60 marbles, respectively. They want to divide them into groups of equal size. What is the largest group size possible?
 5. Write the prime factorization of 144 and verify it by multiplication.
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Answer Key with Explanations

Multiple Choice Questions

1. c) 20 (20 has more than two factors, so it's composite.)
2. b) 27 (Sum of the digits is $2 + 7 = 9$, divisible by 3.)
3. c) 2×5^2 (Prime factors of 50 are 2 and 5.)
4. b) 12 (LCM of 4 and 6 is 12.)
5. c) 12 (Common factors are 1, 2, 3, 4, 6, and 12. Highest is 12.)

Fill in the Blanks

1. 9
2. Prime
3. 2^6
4. Common
5. 0

True or False

1. True (2 is the only even number that is prime.)
2. False (HCF of 8 and 12 is 4, not 24.)
3. True (All numbers divisible by 4 are divisible by 2.)
4. True (This is a basic property of numbers greater than 1.)
5. True (Prime factorization of 200 is $2^3 \times 5^2$.)

Direct Numeric

1. $2^3 \times 3^2$.
2. $\text{HCF} = 3^2 = 9$
3. $10 \times 10 \times 10 \times 10 = 10,000$
4. $\text{HCF} = 15$
5. $2^2 \times 3 \times 7$

Word Problems

1. 16 baskets (HCF of 32 and 48 is 16.)
2. 30 students (HCF of 90 and 120 is 30.)
3. Yes, divisible (A number divisible by both 2 and 5 is divisible by their LCM, which is 10.)
4. 12 marbles (HCF of 36 and 60 is 12.)
5. $144 = 2^4 \times 3^2$. Verified by $2 \times 2 \times 2 \times 2 \times 3 \times 3 = 144$.