

## PRACTICE WORKSHEET 2: MULTIPLES | CLASS 5 MATHEMATICS

### Multiple Choice Questions (5)

- Which of the following pairs has an LCM of 60?
  - 12 and 20
  - 15 and 30
  - 10 and 15
  - 6 and 12
- The LCM of two numbers is 72, and their HCF is 12. If one of the numbers is 24, the other number is:
  - 18
  - 36
  - 48
  - 12
- What is the smallest number divisible by both 8 and 12?
  - 20
  - 36
  - 48
  - 72
- A number that is a multiple of both 9 and 15 must also be a multiple of:
  - 3
  - 45
  - 18
  - 27
- Which of the following statements is true about the LCM and HCF of two numbers?
  - a) LCM is always greater than or equal to the HCF.
  - b) LCM is always smaller than the HCF.
  - c) LCM and HCF are always equal.
  - d) There is no relation between LCM and HCF.

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### Fill in the Blanks (5)

- The LCM of 18 and 24 is \_\_\_\_\_, and their HCF is \_\_\_\_\_.
  - A common multiple of 5 and 8 is \_\_\_\_\_, and the least common multiple is \_\_\_\_\_.
  - The LCM of two prime numbers is equal to their \_\_\_\_\_.
  - To find the LCM of three numbers using prime factorization, you multiply the \_\_\_\_\_ powers of all their prime factors.
  - A number divisible by both 6 and 15 must also be divisible by their \_\_\_\_\_.
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### True or False Questions (5)

1. The LCM of two numbers is always one of the numbers.
  2. The product of two numbers is equal to the product of their LCM and HCF.
  3. The LCM of 8 and 12 is greater than 24.
  4. The LCM of two numbers is always a multiple of their HCF.
  5. The LCM of any two odd numbers is always odd.
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### Direct Numerical Questions (5)

1. Find the LCM of 12, 15, and 18 using prime factorization.
  2. A number is a multiple of both 4 and 6. Find the smallest such number and the next two multiples.
  3. Calculate the LCM of 20, 25, and 30.
  4. The product of two numbers is 360, and their HCF is 12. Find their LCM.
  5. A teacher wants to arrange 28, 42, and 56 books in equal stacks. Find the LCM to determine the smallest number of stacks.
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### Word Problems (5)

1. Two bells ring at intervals of 9 minutes and 12 minutes. Both bells ring together at 6:00 AM. At what time will they ring together again?
2. A bus arrives at a stop every 18 minutes, and a train arrives every 24 minutes. If they both arrive at the station at 10:00 AM, when will they next arrive together?
3. A farmer plants flowers in rows. He uses 6 rows for roses, 8 rows for tulips, and 12 rows for sunflowers. Find the LCM to determine the smallest number of rows needed to plant the flowers in complete patterns.
4. Ravi, Meena, and Ali start jogging around a park. Ravi completes a lap in 12 minutes, Meena in 16 minutes, and Ali in 20 minutes. After how many minutes will they all meet at the starting point again?
5. A vendor arranges 30 apples, 45 oranges, and 60 bananas in identical fruit baskets. Find the LCM to determine the minimum number of baskets needed to keep the fruits.

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### Answer Key with Explanations

#### Multiple Choice Questions

1. a) 12 and 20 (LCM =  $2^2 \times 3 \times 5 = 60$ .)
2. a) 18 (Using  $HCF \times LCM = \text{Product of numbers}$ ,  $12 \times 72 = 24 \times x$ ,  $x = 18$ )
3. c) 48 (LCM of 8 and 12 is  $2^4 = 48$ .)
4. b) 45 (LCM of 9 and 15 is 45.)
5. a) LCM is always greater than or equal to the HCF.

#### Fill in the Blanks

1. 72, 6
2. 40, 40
3. Product
4. Highest
5. LCM

#### True or False

1. False (This happens only when one number is a multiple of the other.)
2. True ( $LCM \times HCF = \text{Product of numbers}$ )
3. True (LCM of 8 and 12 is 48, greater than 24.)
4. True (LCM is always a multiple of the HCF.)
5. True (Odd numbers only have odd multiples.)

#### Direct Numerical Questions

1.  $2^2 \times 3 \times 5 = 180$ .
2. Smallest = 12 (LCM of 4 and 6), next multiples: 24, 36.
3.  $2^2 \times 3 \times 5^2 = 300$ .
4.  $LCM = \text{Product of numbers} / HCF = 360 / 12 = 30$ .
5. LCM of 28, 42, and 56 =  $2^3 \times 7 = 56$ .

#### Word Problems

1. 6:36 AM (LCM of 9 and 12 = 36 minutes.)
2. 10:72 AM or 11:12 AM (LCM of 18 and 24 = 72 minutes.)
3. 24 rows (LCM of 6, 8, and 12 = 24.)
4. 240 minutes (LCM of 12, 16, and 20 = 240 minutes.)
5. 90 baskets (LCM of 30, 45, and 60 = 90.)