

PRACTICE WORKSHEET 3: MULTIPLES | CLASS 5 MATHEMATICS

Multiple Choice Questions (5)

- Which of the following is a common multiple of 12, 18, and 24?
 - 36
 - 48
 - 72
 - 96
- The LCM of 16, 24, and 32 is:
 - 192
 - 256
 - 96
 - 48
- If the LCM of two numbers is 120 and one number is 15, the other number could be:
 - 30
 - 40
 - 24
 - 50
- The smallest number divisible by both 9 and 15 is:
 - 30
 - 45
 - 60
 - 90
- The LCM of three consecutive numbers, 3, 4, and 5, is:
 - 15
 - 60
 - 20
 - 120

Fill in the Blanks (5)

- The LCM of 14 and 21 is _____, and their HCF is _____.
 - A number that is a multiple of 8 and 12 is also a multiple of their _____.
 - To find the LCM of two numbers, we need to multiply the highest powers of all their _____ factors.
 - The LCM of any two prime numbers is always their _____.
 - The smallest number that is divisible by both 6 and 15 is _____.
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True or False Questions (5)

1. The LCM of three numbers is always greater than the largest number.
 2. A number that is a multiple of 4 and 6 must also be a multiple of 12.
 3. The LCM of 8, 12, and 16 is less than 100.
 4. If two numbers are prime, their LCM is their product.
 5. The LCM of two odd numbers is always odd.
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Direct Numerical Questions (5)

1. Find the LCM of 25, 30, and 45 using prime factorization.
 2. List the first three common multiples of 10, 15, and 20.
 3. Calculate the LCM of 36, 48, and 60 using division.
 4. The product of two numbers is 960, and their HCF is 16. Find their LCM.
 5. A teacher has 64 pencils, 96 erasers, and 128 rulers. Find the LCM to determine the smallest number of identical gift packs she can make.
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Word Problems (5)

1. Three bells ring at intervals of 4 minutes, 6 minutes, and 9 minutes, respectively. They all ring together at 12:00 noon.
 - a. When will they ring together next?
 - b. How many times will they ring together before 1:00 PM?
 2. Two buses stop at a station at intervals of 20 minutes and 30 minutes, respectively.
 - a. If both stop together at 8:00 AM, when will they stop together again?
 - b. How many times will they stop together by 12:00 noon?
 3. A teacher wants to arrange 45 boys, 60 girls, and 75 students in identical rows for an event.
 - a. What is the smallest number of rows needed to ensure all groups fit perfectly?
 - b. How many students will be in each row?
 4. Three friends, Alex, Ben, and Cara, are exercising. Alex completes a lap in 8 minutes, Ben in 12 minutes, and Cara in 18 minutes.
 - a. After how many minutes will they all meet at the starting point again?
 - b. How many laps will each friend have completed by then?
 5. A farmer rotates crops on three fields at intervals of 15 days, 20 days, and 25 days.
 - a. After how many days will the farmer rotate crops on all three fields on the same day?
 - b. How many rotations will each field have completed by that day?
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Answer Key with Explanations

Multiple Choice Questions

1. c) 72 (LCM of 12, 18, and 24 = $2^3 \times 3^2 = 72$.)
 2. a) 192 (LCM of 16, 24, and 32 = $2^5 \times 3 = 192$.)
 3. b) 40 (Using $\text{LCM} \times \text{HCF} = \text{Product of numbers}$, $120 = 15 \times x$, $x = 40$)
 4. b) 45 (LCM of 9 and 15 is the smallest number divisible by both.)
 5. d) 60 (LCM of 3, 4, and 5 = $2^2 \times 3 \times 5 = 60$)
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Fill in the Blanks

1. 42, 7
 2. LCM
 3. Prime
 4. Product
 5. 30
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True or False

1. True
 2. True
 3. True
 4. True
 5. True
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Direct Numerical Questions

1. $5^2 \times 3^2 \times 2 = 450$.
 2. 30, 60, 90
 3. $2^4 \times 3^2 \times 5 = 240$.
 4. $960 \div 16 = 60$.
 5. $2^7 \times 3 = 192$.
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Word Problems

1. (a) LCM of 4, 6, and 9 = $2^2 \times 3^2 = 36$. Next at 12:36 PM.
(b) From 12:00 to 1:00 PM: $60 \div 36 = 1$ remainder 24. Bells ring once.
2. (a) LCM of 20 and 30 = $2^2 \times 3 \times 5 = 60$. Next at 9:00 AM.
(b) From 8:00 AM to 12:00 noon: $240 \div 60 = 4$.
3. (a) LCM of 45, 60, and 75 = $3^2 \times 5^2 = 225$.
(b) $225 \div 3 = 75$ students per row.
4. (a) LCM of 8, 12, and 18 = $2^3 \times 3^2 = 72$ minutes..
(b) Alex: 9 laps, Ben: 6 laps, Cara: 4 laps.
5. (a) LCM of 15, 20, and 25 = $2^2 \times 3 \times 5^2 = 300$
(Field 1: 20 rotations, Field 2: 15 rotations, Field 3: 12 rotations.)