

CLASS 10 MATH TEST PAPER 1

Class 10 - Mathematics

Time Allowed: 45 minutes

Maximum Marks: 20

Section A

1. The LCM of $2^3 \times 3^2$ and $2^2 \times 3^3$ [1]
a) 2×3^2 b) $2^3 \times 3^3$
c) $2^2 \times 3^2$ d) $2^2 \times 3$
2. The HCF and the LCM of 12, 21, 15 respectively are: [1]
a) 3, 140 b) 420, 3
c) 12, 420 d) 3, 420
3. If two positive integers 'a' and 'b' are written as $a = pq^2$ and $b = p^3q^2$, where 'p' and 'q' are prime numbers, then LCM(a, b) = [1]
a) pq b) p^3q^2
c) p^2q^3 d) p^2q^2
4. If n is a natural number, then 8^n cannot end with digit [1]
a) 4 b) 6
c) 2 d) 0
5. The lines represented by $3x + y - 12 = 0$ and $x - 3y + 6 = 0$ intersects the x - axis at [1]
a) (-6, 0) and (4, 0) b) (-6, 0) and (-4, 0)
c) (6, 0) and (-4, 0) d) (6, 0) and (4, 0)
6. The value of k, if (6, k) lies on the line represented by $x - 3y + 6 = 0$, is [1]
a) 12 b) 4
c) -4 d) -12
7. Find LCM of 480 and 256 using prime factorization. [1]

Section B

8. Find the HCF and LCM of 108, 120 and 252 using prime factorisation method. [2]
9. Find the LCM and HCF of the pairs of integers 336 and 54 and verify that LCM \times HCF = product of the two numbers. [2]
10. Solve the pair of linear equations by the substitution method: $x + y = 14$; $x - y = 4$. [2]
11. Show that $x = 2$, $y = 1$ is a solution of the system of simultaneous linear equations [2]
 $3x - 2y = 4$
 $2x + y = 5$

Section C

12. Solve the following system of linear equations graphically:

[5]

$$2x - y - 4 = 0$$

$$x + y + 1 = 0$$

Find the points where the lines meet y-axis.

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