

SECOND MID TERM TEST - 2023

Standard VIII

Reg.No.

MATHS

Time : 1.30 hrs

Marks : 50

I. Choose the correct answer:

7 x 1 = 7

1. If $(a - b) = 3$ and $ab = 5$, then $a^3 - b^3 =$ _____.
 a) 15 b) 18 c) 62 d) 72
2. Factors of $4 - m^2$ are
 a) $(2 + m)(2 + m)$ b) $(2 - m)(2 - m)$
 c) $(2 + m)(2 - m)$ d) $(4 + m)(4 - m)$
3. The value of x in the equation $x + 5 = 12$ is _____.
 a) 5 b) 7 c) 0 d) -5
4. If the sum of a number and its half is 30, then the number is _____.
 a) 15 b) 20 c) 25 d) 40
5. What is the eleventh Fibonacci number?
 a) 55 b) 77 c) 89 d) 144
6. Every 3rd number of the Fibonacci sequence is a multiple of _____.
 a) 2 b) 3 c) 5 d) 8
7. Two numbers are said to be co-prime numbers if their HCF is _____.
 a) 2 b) 3 c) 0 d) 1

II. Match the following :

5 x 1 = 5

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|-----------------------------|------------------|
| 8. $\frac{x}{2} = 10$ | x = 4 |
| 9. $a^2 - b^2$ | bh sq. units |
| 10. $20 = 6x - 4$ | 9 |
| 11. HCF of 18 and 27 | x = 20 |
| 12. Area of a parallelogram | $(a + b)(a - b)$ |

III. Answer any 5 questions.

13. Expand $(3m + 5)^2$ using identity.
14. Expand $(x + 4)^3$
15. Factorise : $18xy - 12yz$
16. Factorise : $x^2 + 8x + 15$
17. Solve the algebraic expression : $2x + 5 = 9$
18. Solve : $\frac{2x}{3} - 4 = \frac{10}{3}$
19. Using repeated subtraction method, find the HCF of 42 and 70.

IV. Answer any 4 questions.

4 × 5 = 20

20. Simplify : $(x + 3)(x + 5)(x + 2)$
21. Find the volume of the cube whose side is $(x + 1)$ cm.
22. Factorise the following expression using $(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$
 $64x^3 + 144x^2 + 108x + 27$
23. If one number is seven times the another and their difference is 18, find the numbers.
24. The sum of three consecutive odd numbers is 75. Which is the largest among them?
25. Using repeated division method, find the HCF of 455 and 26.

V. Construct any one of the following.

1 × 8 = 8

26. a). Construct the parallelogram CAMP with CA = 6 cm, AP = 8 cm and CP = 5.5 cm.

(OR)

- b) Construct the rhombus NEST with NS = 9 cm and ET = 8 cm.

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