

SMS

SECOND MID TERM TEST - 2024**8** - Std**MATHS**

Time : 1:30 Hrs.

Marks : 50

I Choose the correct answer and write.

5 X 1 = 5

- If $x^2 - y^2 = 16$ and $(x + y) = 8$ then $(x - y)$ is
a) 8 b) 3 c) 2 d) 1
- $(a-b) = 3$ and $ab = 5$ then $a^3 - b^3 =$
a) 15 b) 18 c) 62 d) 72
- Factors of $9x^2 + 6xy$ are
a) $3y, (x + 2)$ b) $3x, (3x + 3y)$
c) $6x, (3x + 2y)$ d) $3x, (3x + 2y)$
- One factor of $x^3 + y^3$
a) $(x - y)$ b) $(x + y)$ c) $(x + y)^3$ d) $(x - y)^3$
- Every 3rd number of the Fibonacci sequence is a multiple of
a) 2 b) 3 c) 5 d) 8

II Fill in the underlined space.

5 X 1 = 5

- The value of m in the equation $8m = 56$ is
- The linear equation in one variable has solution.
- To construct a parallelogram measurements are enough.
- The solution of the equation $ax + b = 0$ is
- If 5 persons can do 5 jobs in 5 days, then 50 persons can do 50 jobs in

III Match.

5 X 1 = 5

- $(a^2 - b^2)$ - 5
- $\frac{x}{2} - 10$ - $\frac{1}{2} d_1 \times d_2$
- Fibonacci number - $(a + b)(a - b)$
- Area of rhombus - 20
- $x + 2 = 7$ - 1, 1, 2, 3, 5, 8

IV Answer any two marks questions. (5 only)

5 X 2 = 10

- Expand $(3m + 5)^2$.
- Factorise : $9x^5y^3 + 6x^3y^2 - 18x^2y$.
- Factorise : $x^2 + 8x + 15$.
- Solve : $2x + 5 = 9$.
- The sum of three consecutive odd numbers is 75. Which is the largest among them?
- A and B together can do a piece of work in 16 days and A alone can do it in 48 days. How long will B take to complete the work?
- Find the highest common factor for the numbers 36 and 80 by repeated subtraction method.

V Answer five marks questions. (4 only)

4 X 5 = 20

- Simplify : $(p-2)(p+1)(p-4)$.
- Factorise : $y^3 - 18y^2 + 108y - 216$.
- Find the value of m . $\frac{m+9}{3m+15} = \frac{5}{3}$.
- The sum of two numbers is 36 and one number exceeds another by 8. Find the numbers.
- A mat of length 180m is made by 15 women in 12 days. How long will it take for 32 women to make a mat of length 512m?
- Find the highest common factor for the numbers 455 and 26 by repeated division method.

VI Answer any one of the following questions.

1 X 5 = 5

- Construct a parallelogram ARTS with $AR = 6\text{cm}$, $RT = 5\text{cm}$ and $\angle ART = 70^\circ$ and find its area.
(OR) Construct a rhombuses ROSE with $RO = 5\text{cm}$, $RS = 8\text{cm}$ find its area.

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