Afternoon

Std - VIII | First Semester Examination 2019 - 20 | Marks - 50

Time 2.00 Hrs. | Sub - Mathematics | Pages - 2

1. A) Fill in the blanks. 5

1) If all the sides and all the angles of a quadrilateral are congruent then it is called a .....

2) $\sqrt{2}$ is an ..... number.

3) The lines in the same plane which do not intersect each other are called ..... lines.

4) The segment joining the vertex and mid point of the opposite side is called a .....of the triangle.

5) Square root of zero is .....

B) Match the columns.

'A' group	'B' group
1) a^0	a) a^{m-n}
2) a^{-m}	b) a^{m+n}
3) $(a^m)^n$	c) 1
4) $a^m \times a^n$	d) a^{mn}
5) $a^m \div a^n$	e) $\frac{1}{a^m}$

2. Solve the following examples. (any five)

1) Write in the form 'n^{th} not of a' in each of the following numbers.

a) $(51)^{\frac{2}{3}}$ b) $(15)^{\frac{1}{5}}$

2) Expand : $(P + 8)(P - 3)$

3) Convert the following number in decimal form. $\frac{9}{14}$

4) Compare the following numbers

a) -7, -2 b) $\frac{40}{29}$, $\frac{141}{29}$

5) Solve

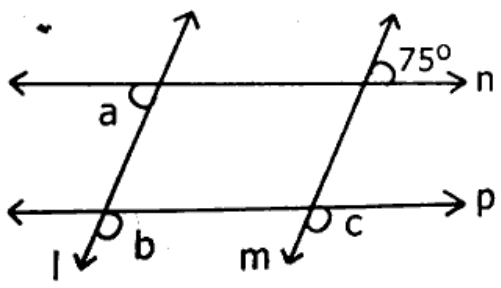
a) $3^5 \times 3^9 = 3^{\square}$ b) $9^3 \div 9^1 = 9^{\square}$

6) Factorize : $x^2 + 9x + 18$

3. A) Solve any five sub-questions of the following

1) Expand : $(2m - 5)^3$
2) Draw a rhombus PQRS such that $\ell(PR) = 3.6$ cm and $\ell(QS) = 6$cm find
   i) $\ell(PQ)$ ii) Perimeter of $\square$ PQRS
3) Find the cube root of 8000.
4) If marked price = ₹1700, selling price = ₹1540 then find the discount.
5) $x \propto y$ if $x = 4$ and $y = 20$ then find constant of variation and write equation of variation
6) Factorize : $2y^2 - 11y + 5$

4. Solve any four sub-questions (any 4)

1) If diagonal of a rectangle is 26 cm and one side is 24cm, find the other side.
2) Find the values of $(41)^3$ with the help of formula.
3) 

In the adjoining figure line P || line n and line ℓ||, line m. Find the measures of a, b, c using the measures of given angle.
4) A car with speed 60 km/hr. takes 8 hours to travel some distance. What should be the increage in the speed if the same distance is to be covered in $7\frac{1}{2}$ hrs.?
5) In ΔPQR ℓ (PQ) = 7 cm, ℓ (QR) = 8 cm, and $\ell(PR)$ = 9cm Draw ΔPQR

5. Solve any two of the following example.

1) 120 bags of half litre milk can be filled by a machine with in 3 minutes find the time to fill such 1800 bags ?
2) Draw a rhombus KLMN such than its side is 4cm and MK = 75°
3) Simplify
   $(3a + 5b)^3 - (3a - 5b)^3$