

MATHEMATICS

Question 1

Choose the correct answer from the given options.

[7x1=7]

1) Which number should be added to $\frac{-5}{8}$ to get $\frac{5}{9}$?

- a) $\frac{5}{72}$ b) $1\frac{13}{72}$ c) $\frac{13}{72}$ d) $\frac{72}{5}$

2) The degree of $x^3 - x^2y^2 - 8y^2 + 2$ is:

- a) 2 b) 3 c) 4 d) 7

3) The quotient of $-24x^4y^3$ when divided by $-2x^2y^5$ is:

- a) $\frac{12x^2}{y^3}$ b) $\frac{12x^2}{y^2}$ c) $-\frac{12x^2}{y^2}$ d) $12x^2y^2$

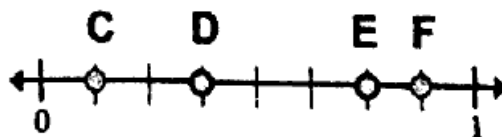
4) Which of the following number would have digit 6 at unit place?

- a) 19^2 b) 24^2 c) 25^2 d) 13^2

5) Assertion (A): 7828 is a perfect square number.

Reason (R): A perfect square is a number that can be expressed as the product of an integer by itself or as the second exponent of an integer.

- a) Both A and R are true and R is the correct explanation of A
 b) Both A and R are true but R is not the correct explanation of A
 c) A is true but R is false
 d) A is false but R is true

6) Which point is $\frac{7}{8}$?

- a) point C b) point F c) point E d) point D

7) Assertion (A): Rational numbers are not associative for multiplication.

Reason (R): The associative property states that the sum or the product of three or more numbers does not change if they are grouped in a different

way.

- Both A and R are true and R is the correct explanation of A
- Both A and R are true but R is not the correct explanation of A
- A is true but R is false
- A is false but R is true

Question I (a)

8) The product of two numbers is $\frac{-28}{81}$. If one of the number is $\frac{14}{27}$.

find the other.

[3]

Question II

1) Simplify: $\frac{-11}{6} + \frac{1}{4} + \frac{-8}{3} - \frac{3}{8} + 3$

[3]

2) Find the square root of 16384 by long division method.

[3]

3) Subtract the sum of $(3y^2 + 2y - 1)$ and $(-2y^2 + 3y - 5)$ from the sum of

$(5y^2 - 6y)$ and $(3y^2 + 5y - 3)$

[4]

Question III

1) If 5929 students are sitting in an auditorium in such a manner that there are as many students in a row as there are rows in the auditorium. How many rows are there in the auditorium?

[3]

2) Simplify: $3a - \{3a - \{3a - (3a - \overline{3a - b})\}\}$

[3]

3) Divide : $(2x^3 - 8x^2 + 5x - 8) \div (x - 2)$

[4]

Question IV

1) What should be multiplied with 4851 to make it a perfect square?

[3]

2) Find $(x + y) \div (x - y)$, if $x = \frac{-1}{3}$, $y = \frac{3}{4}$

[3]

3) Mr. Kumar is a business man as well as social worker. He always works for the welfare of the villagers. In his village there was no school building so he plans to construct a school in his village. The length of the plot is $12\frac{1}{3}$ m and breadth is 9 m respectively. The perimeter of this rectangular plot is equal to the perimeter of a square plot kept for playground near to the school. Find:

a) Perimeter of the rectangular plot.

b) Area of the rectangular plot.

c) Length of the square plot.

d) Cost of leveling the rectangular plot if cost per square metre is ₹150. [4]