



FACULTY HIGHER SECONDARY SCHOOL
SAMPLE PAPER 19-20
SUBJECT- MATHEMATICS
CLASS-IX
FULL MARKS:50

SECTION-A

1. Answer the following question.

a. Choose the correct answer

i. $\sqrt{x^{144}}$ is

A. x^2

B. x^{36}

C. x^{72}

D. x^{24}

ii. $0.\overline{35}$ is

A. $\frac{35}{90}$

B. $\frac{35}{100}$

C. $\frac{35}{9}$

D. $\frac{35}{99}$

iii. Zeros of $2x-1$ is

A. 2

B. -2

C. $-\frac{1}{2}$

D. $\frac{1}{2}$

iv. If $x+y+z=0$ then

A. $x^3 + y^3 + z^3 = 0$

B. $(x+y+z)^3 = 3xyz$

C. $x^3 + y^3 + z^3 = 3xyz$

D. $x^2 + y^2 + z^2 = 2xyz$

v. If $x=2$ and $y=3$ then x^2y is

A. 21

b. 12

c. 18

d. 36

2. If $x = \frac{2}{\sqrt{5}}$ and $\frac{1}{x} = p\sqrt{5}$ find the value of p.

3. Rationalise $\frac{1}{\sqrt{3}}$

4. Write the natural no. n if $n = 3^4$

5. Simplify : $12^{3/2} \div 3^{3/2}$

6. Find zeroes of $5x + 7$

7. Give one solution of the equation $3x+5y=15$

8. Find K if (3,-4) is a solution of $5x+ky=7$

9. Write the equation of x-axis and y-axis.

10. Write the complementary angle of 57°

11. The supplementary angles are in the ration 3:5 find the angles.

SECTION-B

12. If $\sqrt{2} = 1.414$ Write the value of $\frac{7}{\sqrt{2}}$

13. Find 5 rational number between $\frac{2}{3}$ and $\frac{1}{5}$.

14. Express $0.\overline{73}$ in the form of $\frac{p}{q}$

15. Factorise $x^2 + 10x + 21$

SECTION C

16. Draw the graph of the linear equation $y = mx + c$ for $m=2$ and $c=1$. Read from the graph the value of y when $x = \frac{3}{2}$

17. If a point C be mid-point of a line segment AB , then prove that $AC=BC = \frac{1}{2} AB$

18. Rationalise the denominator .

$$\frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$$

19. If $5^{2x-1} - 25^{x-1} = 2500$ find the value of x .

20 Show $\sqrt{5}$ on the number line.

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21. Simplify.

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$$\frac{7\sqrt{3}}{\sqrt{10} + \sqrt{3}} - \frac{2\sqrt{5}}{\sqrt{6} + \sqrt{5}} - \frac{3\sqrt{2}}{\sqrt{15} + 3\sqrt{2}}$$

22. If $x+y+z=0$

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Prove that $x^3+y^3+z^3 = 3xyz$

23. Prove that sum of these interior angles of a triangle is 180° .

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