

# COMMON QUARTERLY EXAMINATION - 2024



Standard VIII

Reg.No.

**MATHEMATICS**

Part - I

*For*  
25/5/24

Marks : 100

14 x 1 = 14

Time : 2.30 hrs

I. Choose the correct answer:

- Which of the following rational numbers the greatest?  
 a)  $\frac{-17}{24}$       b)  $\frac{-13}{16}$       c)  $\frac{7}{-8}$       d)  $\frac{-31}{32}$
- The standard form of the sum  $\frac{3}{4} + \frac{5}{6} + \left(\frac{-7}{12}\right)$   
 a) 1      b)  $\frac{-1}{2}$       c)  $\frac{1}{12}$       d)  $\frac{1}{22}$
- Which of these rational numbers which are additive inverse?  
 a) 7      b)  $\frac{-5}{7}$       c) 0      d) all of these
- Closure property is not true for division of rational numbers because of the number  
 a) 1      b) -1      c) 0      d)  $\frac{1}{2}$
- $\sqrt{48}$  is approximately equal to \_\_\_\_\_  
 a) 5      b) 6      c) 7      d) 8
- By what number should  $(-4)^{-1}$  be multiple so that the product becomes  $10^{-1}$ ?  
 a)  $\frac{2}{3}$       b)  $\frac{-2}{5}$       c)  $\frac{5}{2}$       d)  $\frac{-5}{2}$
- The cross section of a solid cylinder  
 a) square      b) circle      c) rectangle      d) sphere
- The area of a square is  $36x^4y^2$ , then its side is \_\_\_\_\_  
 a)  $6x^4y^2$       b)  $8x^2y^2$       c)  $6x^2y$       d)  $-6x^2y$
- If the area of the rectangle is  $48m^2n^3$  whose length is  $8mn^2$ , then its breadth is  
 a)  $6mn$       b)  $8m^2n$       c)  $7m^2n^2$       d)  $6m^2n^2$
- When 60 is subtracted from 60% of a number to give 60, the number is  
 a) 60      b) 100      c) 150      d) 200
- By selling a flower pot for ₹528, a woman gains 20%. At what price should she sell it to gain 25%?  
 a) ₹500      b) ₹550      c) ₹553      d) ₹573

12. The cost of a machine ₹18,000 and it depreciates at  $16\frac{2}{3}\%$  annually, its value after two years will be \_\_\_\_\_.
- a) ₹12,000      b) ₹12,500      c) ₹15,000      d) ₹16,500
13. Two similar triangles will always have \_\_\_\_\_ angles.
- a) acute      b) obtuse      c) right      d) match
14. If  $\triangle ABC \sim \triangle PQR$  in which  $\angle A = 53^\circ$  and  $\angle Q = 77^\circ$ , then  $\angle R$  is
- a)  $50^\circ$       b)  $60^\circ$       c)  $70^\circ$       d)  $80^\circ$

## Part - II

II. Answer any 10 questions.

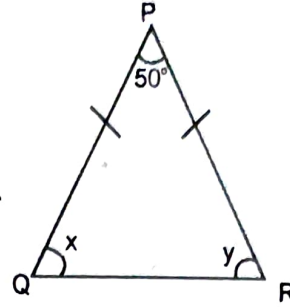
10 x 2 = 20

15. Compare the pairs of rational number :  $\frac{3}{-4}, \frac{-1}{2}$
16. Find the square root of  $\frac{144}{225}$
17. Find the smallest number by which 200 should be multiplied to make it a perfect cube.
18. Find the value of  $4^{-3}$ .
19. A circular shaped gymnasium ring of radius 35 cm is divided into 5 equal arcs shaded with different colours. Find the length of each of the arc.
20. Find the area of the sector whose length of arc 48 m and radius 10 m.
21. Verify Euler's formula for the faces 6, vertices 8 and edges 12 for polyhedrons.
22. Find the product of  $3x^2y, -3xy^3, x^2y^2$
23. Divide :  $45x^3y^2z^4 \div (-15xyz)$
24. Simplify :  $\frac{3m^2}{m} + \frac{2m^4}{m^3}$
25. If  $x\%$  of 600 is 450, then find the value of  $x$ .
26. If the selling price of 10 rulers is the same as the cost price of 15 rulers, then find the profit in percentage.

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VIII Maths

27. Find the difference in C.I and S.I for  $P = ₹5000$ ,  $r = 4\%$  p.a,  $n = 2$  years



28. Find the unknowns in the given figure.

29. Can a right triangle have sides that measures 5 cm, 12 cm and 13 cm?

### Part - III

III. Answer any 10 questions.

10 x 5 = 50

30.  $a = \frac{1}{2}$ ,  $b = \frac{2}{3}$ , then find  $(a + b) \div (a - b)$

31. Find the square root of 11025 by long division method.

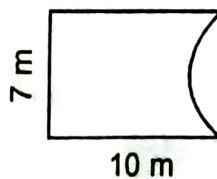
32. Find the cube root of  $24 \times 36 \times 80 \times 25$

33. Solve for  $x$ :  $\frac{5^5 \times 5^{-4} \times 5^x}{5^{12}} = 5^{-5}$

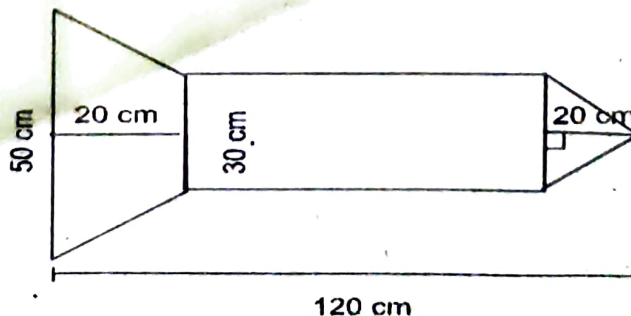
34. Find the central angle of each of the sectors whose area is  $462 \text{ cm}^2$  and radius

21 cm.  $\left(\pi = \frac{22}{7}\right)$

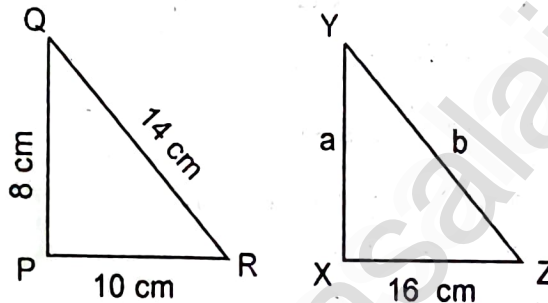
35. Find the perimeter and area of the given figure.



36. A rocket drawing has the measures as given in the figure. Find its area.



37. Multiply  $(2x + 5y)$  and  $(3x - 4y)$
38. If  $l = 4pq^2$ ,  $b = -3p^2q$ ,  $h = 2p^3q^3$ , then find the value of  $l \times b \times h$
39. Divide  $5xy^2 - 18x^2y^3 + 6xy$  by  $6xy$ .
40. The income of a person is increased by 10% and then decreased by 10%. Find the change in his income.
41. Find the single discount in percentage which is equivalent to two successive discounts of 25% and 20% given on an article.
42. The value of a motorcycle 2 years ago was ₹70,000. It depreciates at the rate of 4% p.a. Find its present value.
43. In the given figure,  $\Delta PQR \sim \Delta XYZ$ . Find  $a$  and  $b$ .



44. Find the quadrants without plotting the points on a graph sheet.  
 $(3, -4)$   $(5, 7)$   $(2, 0)$   $(-3, -5)$   $(0, 10)$

#### Part - IV

#### IV. Answer the following questions.

$2 \times 8 = 16$

45. a) Construct the quadrilateral with given measurements, also find its area.  
 $ABCD$ ,  $AB = 5$  cm,  $BC = 4.5$  cm,  $CD = 3.8$  cm,  $DA = 4.4$  cm and  $AC = 6.2$  cm.  
**(OR)**
- b) Construct a trapezium  $CARD$  in which  $\overline{CA}$  is parallel to  $\overline{DR}$ ,  $CA = 9$  cm,  $\angle CAR = 70^\circ$ ,  $AR = 6$  cm and  $CD = 7$  cm. Also find its area.
46. a) Plot the following points in graph sheet.  
 $A(5, 2)$ ,  $B(-7, -3)$ ,  $C(-2, 4)$ ,  $D(0, -5)$ ,  $E(2, 0)$   
**(OR)**
- b) Draw a line joining the points  $A(-2, 6)$  and  $B(4, -3)$  in graph sheet.

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