



SAMPLE PAPER FINAL TERM EXAMINATION 2023-24

SUBJECT: MATHEMATICS

CLASS: VII

Time: 2.5Hrs

M.M: 60

IMPORTANT INSTRUCTIONS:

- 1) All questions are compulsory.
- 2) Q.1 to Q.15 carry 1 mark each (MCQ).
- 3) Q.16 to Q.22 carry 2 marks each.
- 4) Q.23 to Q.27 carry 3 marks each.
- 5) Q.28 to Q.31 carry 4 marks each.

SECTION-A (Q1 to Q15 - 1 mark each-MCQ)

Q1. Find the value of expression $4x - 3$ for $x = 1$:

- (a) 4 (b) -3 (c) 3 (d) 1

Q2. Divide $\frac{8}{7} \div \left(\frac{-8}{49}\right)$, the result is:

- (a) 7 (b) -7 (c) 1 (d) -1

Q3. What is the longest side of a triangle called in an right-angled triangle?

- (a) base (b) perpendicular (c) hypotenuse (d) altitude

Q4. When 22.5% converted into a fraction, we get _____

- (a) $\frac{8}{50}$ (b) $\frac{9}{4}$ (c) $\frac{3}{8}$ (d) $\frac{9}{40}$

Q5. 20,00,000 in standard form is :

- (a) 0.2×10^5 (b) 2.0×10^6 (c) 10.2×10^6 (d) 10.2×10^5

Q6. The rational number $\frac{21}{-28}$ in standard form is

- (a) $\frac{-3}{4}$ (b) $\frac{3}{4}$ (c) $\frac{3}{7}$ (d) $\frac{-3}{7}$

Q7. The amount for ₹1000 for 2 years at 5% p.a. is ₹ _____.

- (a) 1200 (b) 1500 (c) 1000 (d) 1100

Q8. Set of a positive and a negative integer whose difference is -3.

- (a) -2,+5 (b) +5,-2 (c) +10,-7 (d) +1,-2

Q9. The next term in the pattern: -11, -8, -5, -2, _____, _____

- (a) -5,-8 (b) 5,8 (c) 2,-1 (d) -1,2

Q10. A triangle is not possible with sides of lengths (in cm)

- (a) 6, 4, 10 (b) 5, 3, 7 (c) 7, 8, 9 (d) 3, 7, 8

Q11. Simplify: $p + (p - q) + q + (q - p)$

- (a) p (b) q (c) $p + q$ (d) $p - q$

Q12. The exponential form of 64 with base 2 is :

- (a) 2^4 (b) 2^5 (c) 2^6 (d) 2^7

Q13. The area of circle of diameter 6.4 cm is

- (a) 32153.6cm^2 (b) 321.536cm^2 (c) 3215.36cm^2 (d) 32.1536cm^2

Q14. Which of the following is not a pair of complementary angles?

- (a) $60^\circ, 30^\circ$ (b) $66^\circ, 24^\circ$ (c) $0^\circ, 90^\circ$ (d) $160^\circ, 20^\circ$

Q15. Write the following statement in the form of an equation:

"The sum of three times x and 10 is 23".

- (a) $3x - 10 = 23$ (b) $3x + 23 = 10$ (c) $3x + 10 = 23$ (d) $3x - 23 = 10$

SECTION-B (Q16 to Q22 - 2 marks each)

Q16. List four rational numbers between $\frac{-2}{6}$ and $\frac{-8}{7}$.

Q17. The temperature at 12 noon was 10°C above zero. If it decreases at the rate of 2°C per hour until midnight, at what time would the temperature be 8°C below zero? What would be the temperature at mid-night?

Q18. Identify the terms and the factors of $-y^2 - yz - z^2$.

Q19. Express 540 as the product of powers of prime factors.

Q20. Find the base, if the area of the triangle is 48cm^2 and height is 8cm.

Q21. 30. Draw figures for the following:

- a) In ΔABC , BE is a median.
- b) In ΔPQR , PQ and PR are altitudes of the triangle.

Q22. Juhi sells a washing machine for ₹13,500. She loses 20% in the bargain. What was the price at which she bought it?

SECTION-C (Q23 to Q27 - 3 marks each)

Q23. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for each of the following values of $a = 12$, $b = -4$ and $c = 2$.

Q24. Sachin scored twice as many runs as Rahul. Together, their runs fell two short of a double century. How many runs did each one score?

Q25. Subtract $(-m^2 + 5mn)$ from $(4m^2 - 3mn + 8)$

ii) Add $(x^2 - y^2 - 1)$, $(y^2 - 1 - x^2)$, and $(1 - x^2 - y^2)$

Q26. Find the difference of sum of $\frac{-8}{19} + \frac{(-2)}{57}$ and sum of $\frac{-6}{38} + \frac{(3)}{57}$

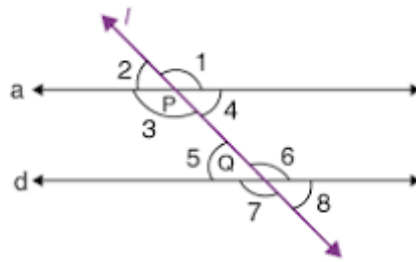
Q27. In an isosceles triangle, a base angle is four times its vertex angle. Find all the angles of a triangle.

SECTION-D (Q28 to Q31 – 4 marks each)

Q28. A 25m long ladder is set against the wall of a house and just reaches a window at a height of 24 m above ground level. How far is the lower end of the ladder from the base of the wall?

Q29. Simplify using laws of exponents and the mention the laws: $\frac{2^4 \times 625}{10^3 \times 16 \times 5^4}$

Q30. In the adjoining figure, a is parallel to d and l is the transversal. Find all the unknown angles if $\angle 2 = 45^\circ$:



Q31. If $P = 5x^3 + 3x^2 - 4x + 1$, $Q = 3x^3 + 5x^2 + 3x - 8$ and $R = 6x^3 - 4x^2 - 7x + 3$, find $(P+Q)-R$.