

CLASS VIII MATHEMATICS SAMPLE PAPER – 1

Time: 3 Hours **Maximum Marks:** 80

Instructions:

1. Attempt all questions.
2. Show complete working.
3. Calculators are not permitted.
4. Draw figures wherever necessary.

Section A – MCQs ($10 \times 1 = 10$)

1. The additive inverse of -25 is ____.
2. Which of the following is a perfect square? (a)225 (b)210 (c)230 (d)250
3. 35% of 400 equals ____.
4. The sum of exterior angles of a polygon is ____.
5. Cube root of 512 is ____.
6. The value of $3^2 \times 2^3$ is ____.
7. Which graph is used to compare data?
8. A parallelogram has opposite sides ____.
9. Rational numbers can be written in the form ____.
10. The probability of an impossible event is ____.

Section B – Very Short Answer ($5 \times 2 = 10$)

11. Write any four rational numbers between 1 and 2.
12. Find the square of 47.
13. Simplify: $(-18) + 45 - 27$.
14. Express 0.875 as a fraction in simplest form.
15. Draw a quadrilateral and name its diagonals.

Section C – Short Answer ($6 \times 3 = 18$)

16. Solve: $7x - 9 = 40$.
17. Find the simple interest on ₹6,500 at 8% per annum for 3 years.
18. Find the area of a trapezium with parallel sides 12 cm and 18 cm and height 9 cm.
19. Construct a histogram using suitable data of your choice.
20. Verify the identity $(a+b)^2 = a^2 + 2ab + b^2$ for $a=4$ and $b=3$.
21. Find the value of $(-12) \times 15 \div (-5)$.

Section D – Long Answer ($4 \times 5 = 20$)

22. A shopkeeper purchased 240 notebooks at ₹28 each and sold them at ₹35 each. Find the total profit.
23. The length and breadth of a rectangular park are 60 m and 45 m. Find its area, perimeter and cost of fencing at ₹150 per metre.

24. Draw a pie chart for the following data: Cricket–36, Football–24, Hockey–18, Badminton–12, Others–10.

25. Solve: A train covers 420 km in 6 hours. Find its average speed and time required to cover 700 km at the same speed.

Section E – HOTS / Application ($2 \times 11 = 22$)

26. Explain with suitable examples how algebraic identities help in mental calculations.

27. Two rectangles have the same area but different dimensions. Can they have the same perimeter? Justify your answer with calculations.