



St. XAVIER'S HIGH SCHOOL

MOCK TEST – MATHEMATICS

GRADE VIII

Time Allowed: 2 Hours

Maximum Marks: 40

General Instructions:

1. All questions are compulsory.
2. The question paper is divided into Sections A, B, C and D.
3. Use appropriate mathematical steps wherever necessary.
4. Calculators are not allowed.

SECTION A ($8 \times 1 = 8$ marks)

Q1. Find the square root of 1764. (1)

- (a) 36 (b) 42 (c) 44 (d) 48

Q2. The least number that must be added to 620 to make it a perfect square is: (1)

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

Q3. Which of the following is a perfect cube? (1)

- (a) 216 (b) 250 (c) 324 (d) 432

Q4. The value of $3^4 \times 3^2$ is: (1)

- (a) 3^6 (b) 3^8 (c) 9^6 (d) 3^2

Q5. The standard form of 0.00000084 is: (1)

- (a) 8.4×10^{-5} (b) 8.4×10^{-6} (c) 8.4×10^{-7} (d) 0.84×10^{-6}

Q6. A number that leaves remainder 3 when divided by 7 can be written as: (1)

- (a) $7n + 3$ (b) $7n - 3$ (c) $3n + 7$ (d) $7n$

Q7. A shopkeeper gives a discount of 20% on an article marked ₹500. The selling price is: (1)

- (a) ₹350 (b) ₹400 (c) ₹450 (d) ₹480

Q8. A right-angled triangle has sides 9 cm and 12 cm as its perpendicular sides. Its hypotenuse is: (1)

- (a) 13 cm (b) 14 cm (c) 15 cm (d) 16 cm

SECTION B (6 × 2 = 12 marks)

Q9. Find the square root of 12.0409. (2)

Q10. Find the cube root of 2744 by prime factorisation. (2)

Q11. Find the value $[4^{-1} + 3^{-1} + 6^{-2}]^{-1}$ (2)

Q12. Find the missing digit x if the number 48x6 is divisible by 9. (2)

Q13. The marked price of a school bag is ₹1,200. A discount of 15% is offered on it. Find: (i) the discount amount (ii) the selling price. (2)

Q14. The sides of a right-angled triangle are 8 cm, 15 cm and 17 cm. Verify whether the triangle satisfies Pythagoras Theorem. (2)

SECTION C (4 × 3 = 12 marks)

Q15. A school wants to arrange 1764 students in a square formation for the annual function. (3)

(i) How many students will be there in each row?

(ii) How many rows will be formed?

(iii) Find the total number of students in the outermost row and column combined, excluding the student at the corner counted twice.

Q16. A cubical box has a volume of $46,656 \text{ cm}^3$. (3)

(i) Find the length of one edge of the box.

(ii) Find the total length of all the edges of the cube.

Q17. Calculate the missing value of “x” in the following expression: $(11/9)^3 \times (9/11)^6 = (11/9)^{2x-1}$ (3)

Q18. A number is represented by $5n + 2$. (3)

(i) What remainder does the number leave when divided by 5?

(ii) Write the next three numbers of this form for $n = 1, 2, 3$.

(iii) Is 37 of the form $5n + 2$? Give reason.

SECTION D (2 × 4 = 8 marks)

Q19. Ravi wants to purchase a laptop whose marked price is Rs. 70200 excluding 8% GST. But he has Rs. 70200 only, so he requests the shopkeeper to reduce the price of laptop in such a way that he has to pay Rs. 70200 including GST. Find the amount reduced by the shopkeeper. (4 marks)

Q20. The following table shows the number of books read by five students in a month: (4 marks)

Student	A	B	C	D	E
Number of Books	4	7	5	9	6

Draw a line graph.