

Maharashtra Board

Class VII

Mathematics

Sample Paper – 1

Time: 2 hrs

Total Marks: 60

General Instructions:

1. All questions are **compulsory**.
2. The question paper consists of **29** questions divided into **five sections** A, B, C, D and E. **Section A** comprises **12** questions of 1 mark each, **Section B** comprises 8 questions of 2 marks each, **Section C** comprises 5 questions of 3 marks each, **Section D** comprises 3 questions of 4 marks each and **Section E** comprises 1 question of 5 marks.
3. Question numbers **1 to 12** in **Section A** are multiple choice questions where you are to select **one** correct option out of the given four.
4. There is no overall choice. However, internal choice has been provided in **2** questions of **three marks** each, **1 question** of **four marks** and **1 question** of **five marks**. You have to attempt only one of the alternatives in all such questions.
5. Use of a calculator is **not** permitted.

SECTION – A

1. In a triangle, a segment drawn from a vertex and perpendicular to the opposite side is called ____ of the triangle.
(A) altitude
(B) perpendicular bisector
(C) median
(D) angle bisector
2. If 'a' is any rational number and m and n are any positive integers, then $a^m \times a^n =$ ____
(A) $a^m \times a^n = a^{m \times n}$
(B) $a^m \times a^n = a^{m+n}$
(C) $a^m \times a^n = a^{m-n}$
(D) $a^m \times a^n = (a^m)^n$
3. Amount = ____
(A) Amount = Principal – Simple interest
(B) Amount = Simple interest – Principal
(C) Amount = Principal + Simple interest
(D) Amount = Simple interest \times Principal

4. $\frac{9}{4}$ is ____
- (A) a natural number
 - (B) a whole number
 - (C) an integer
 - (D) a rational number
5. Profit = _____
- (A) Profit = SP - CP
 - (B) Profit = CP - SP
 - (C) Profit = SP + CP
 - (D) Profit = SP - Loss
6. A quadrilateral with all the sides congruent is called a ____.
- (A) trapezium
 - (B) rhombus
 - (C) rectangle
 - (D) parallelogram
7. A quadrilateral in which only one pair of opposite sides is parallel is called a ____.
- (A) trapezium
 - (B) parallelogram
 - (C) rhombus
 - (D) rectangle
8. The expansion of $(a + b)(a - b)$ is
- (A) $(a + b)(a - b) = a^2 + 2ab + b^2$
 - (B) $(a + b)(a - b) = a^2 - 2ab + b^2$
 - (C) $(a + b)(a - b) = a^2 - b^2$
 - (D) $(a + b)(a - b) = b^2 - a^2$
9. The total surface area of a cuboid is
- (A) $(\text{side})^3$
 - (B) $6(\text{side})^2$
 - (C) length \times breadth \times height
 - (D) $2(\text{length} \times \text{breadth} + \text{breadth} \times \text{height} + \text{length} \times \text{height})$

10. A perpendicular line drawn through the midpoint of the side of a triangle is called the _____.

- (A) altitude of the triangle
- (B) perpendicular bisector of that side
- (C) median of the triangle
- (D) angle bisector

11. If the lengths of all the three sides of a triangle are equal, the triangle is called ____.

- (A) an isosceles triangle
- (B) an equilateral triangle
- (C) a scalene triangle
- (D) a right-angled triangle

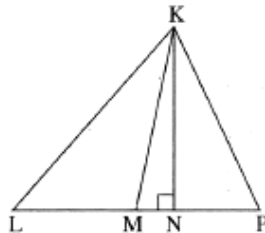
12. If a is any rational number and m and n are any positive integers, then

$(a^m)^n = \underline{\hspace{2cm}}$

- (A) $(a^m)^n = a^{m \times n}$
- (B) $(a^m)^n = a^{m+n}$
- (C) $(a^m)^n = a^{m-n}$
- (D) $(a^m)^n = a^{\frac{m}{n}}$

SECTION - B

13. In the adjoining figure, M is the midpoint of side LP of $\triangle KLP$.



- i. In $\triangle KLP$, seg KN is
- ii. In $\triangle KLP$, seg KM is

14. Find the square root of $\frac{400}{49}$.

15. Write the proper number in the boxes.

$$\left[\left(-\frac{12}{13} \right)^2 \right]^5 = \left(-\frac{12}{13} \right)^\square$$

16. Multiply.

$$4(y^2 - 2y + 7)$$

17. Solve the following equation:

$$y - 2 = 9$$

18. Simplify: $\frac{9}{7} \times \left(-\frac{14}{15} \times \frac{2}{3} \right)$

19. Gulabbhai bought a basket of brinjals for Rs 100 and sold it for Rs 120. What was his profit or loss?

20. What is the area of a rectangle with length 4 cm and breadth 2 cm?

SECTION - C

21. The piece of cloth required to make one bag was 36 cm long and 24 cm broad. How many such bags can be made of a square piece of cloth whose side is 3.6 m?

22. Shiraj bought a TV set for Rs 10,000 and sold it to Suresh for Rs 8000. What loss per cent did Shiraj incur?

OR

Julie bought a sewing machine for Rs 2500 and sold it to a customer for Rs 2700. What was her profit per cent?

23. 10 litres of milk was shared between John and Saurabh. If Saurabh was given 2 litres of milk more than John, how many litres did each get?

24. The perimeter of a rectangular pool is 100 m and its length is 30 m. Find its breadth. If 16 bicycles cost Rs 17,600, how much will 9 bicycle cost?

OR

If 12 labourers take 70 days to complete one work, how many days will 21 labourers take to complete the same work?

25. The expenditure incurred for taking 25 students for a picnic is Rs 625. What will be the expenditure for 40 students?

SECTION - D

26. Draw triangles according to the measurement given below:

In $\triangle ABC$, $m\angle A = 90^\circ$, $l(AB) = 3.8 \text{ cm}$, $l(BC) = 4.2 \text{ cm}$

OR

In $\triangle DEF$, $m\angle E = 90^\circ$, $l(EF) = 4 \text{ cm}$, $l(DF) = 4.5 \text{ cm}$

27. A strip, 2 cm broad, along the insides of a paper which is 20 cm long and 10 cm broad has been coloured. What is the area of the coloured part?

28. A drawing board is 45 cm long and 20 cm broad. A 3 cm wide border has been left on all four sides and the picture is drawn inside it. What is the area of the border?

SECTION - E

29. Draw two separate bar graphs based on the following data:

Subject	Math	Science	Social Science	English
Shiva's marks	70	65	80	85
Gauri's marks	67	72	80	90

OR

The marks of Niranjn obtained in some subjects in his final examination are shown in the bar graph below. Observe the graph and answer the questions:

- (1) In which subject did Niranjn get the highest marks?
- (2) How many marks did he score in Math?
- (3) In which subject did he get 85 marks?
- (4) In which subject did he score his lowest marks?

