

SAMPLE PAPER, 2017-18
MATHEMATICS
CLASS - VIII

TIME-3hrs

M.M. 80

General Instructions:

1. All questions are compulsory.
2. The question paper consists of 30 questions divided into 4 sections, section A, B, C, and D.
3. Section A contains 6 questions of 1 mark each. Section B contains 6 questions of 2 marks each.
Section C contains 10 questions of 3 marks each and section D contains 8 questions of 4 marks each.
4. There is no overall choice however internal choice has been provided in 4 questions of section C and in 3 questions of section D.
5. Use of calculator is not permitted.
6. Draw figures & graphs wherever needed.

SECTION-A (1 mark each)

1. Write in standard form 0.0000507
2. What is the probability to get a prime number in a single throw of a die ?
3. $\frac{3x+5}{5} = 3x$ (True/False)
4. Find the ratio of 5 m to 10 km
5. If edge of a cube becomes double then its SA beomes _____ times and volume becomes _____ times.
6. The coordinates of origin is _____.

SECTION- B (2 marks each)

7. Write all possible outcomes when two coins are tossed together.
8. Evaluate using suitable identity : 102^2
9. Find area of a rhombus if lengths of its two diagonals are 12 cm and 16 cm respectively.
10. Ravi bought a T.V for Rs 10000 which depreciates at the rate of 10% p.a. Find its price after one year.
11. How cone and pyramid are alike ?
12. Divide $(4x^2 - 9)$ by $(2x - 3)$.

SECTION-C (3 marks each)

13. In a blood donation camp 30 students of class XII of a school donated their blood. Their blood groups were recorded as followed :

A,B,O,O,AB,O,A,O,B,A,O,B,A,O,O,A,AB,O,A,A,O,O,AB,B,A,O,B,A,B,O.

- Represent this data in the form of a frequency distribution table (using tally marks). Which value of students is depicted by their act here?
14. One of the parallel sides of a trapezium is 10 cm and its height is 4 cm. Find the length of the other side if its area is 34 cm^2
15. Evaluate by using suitable identity- 9.3×9.7
16. Factorise :- $m^4 - n^4$ **OR**
Factorise then divide: $-156y^3(36y^2-64) / 104y^2(6y+8)$
17. Write Euler's Formula then find no. of faces in a solid if no. of vertices is 8 and no. of edges is 12.
18. Find A,B,C if
- $$\begin{array}{r} AB \\ \times 5 \\ \hline CAB \end{array}$$

19. If 10 men do a work in 20 days. In how many days 20 men will do the same work.

OR

A truck needs 54 litres of diesel for covering a distance of 297 km. How much diesel is required by the truck to cover a distance of 550 km .

20. Simplify and express the result in power notation with positive exponent.
 $(3^{-7} \div 3^{-10}) \times 3^{-5}$

OR

Mass of Mars is 6.42×10^{29} kg and mass of the Sun is 1.99×10^{30} kg. What is the total mass?

21. Plot the given points on the graph paper:-

A (0,5), B(0,-5), C(-5,5), D (-5,0), E (5,5), F (5,-5),

OR

Plot the following three vertices of a rectangle ABCD. A(0,0) , B(5,0), C(5,3) then determine the fourth vertex with the help of the graph.

22. Ankita was given an increment of 10% on her salary. Her new salary is Rs 55000.

What was her salary before increment?

SECTION-D (4 marks each)

23. Sunil loaned Rs 8192 to Raveena to enable her to purchase a T. V. set. If Sunil charged interest at the rate of 12.5% per annum, compounded half-yearly, calculate the amount that Raveena will have to pay to Sunil after $1\frac{1}{2}$ years.

OR

Find the compound interest on a sum of Rs 10000 lent out for $2\frac{1}{2}$ years, if the rate of interest is 10 % p.a. and the interest is being compounded annually.

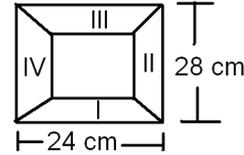
24. Factorise: $16a^2-25b^2+60bc-36c^2$

25. A 5m 60 cm high pole casts shadow of length 3m 20 cm. At the same time find the length of a shadow cast by another pole 10m 50 cm high.

26. A rectangular sheet of length 44 cm and width 10 cm is rolled along its length and thus formed a cylinder. Find its CSA and volume.

OR

Diagram of the below picture frame has outer dimensions = 24 cm × 28 cm and inner dimensions = 16 cm × 20 cm. Find the area of each section of the frame, if the width of each section is same.



27. Evaluate using suitable identity : 1.05×9.5

OR

What should be subtracted from $3x^2 - 4y^2 + 5xy + 20$ to get $-x^2 - y^2 + 6xy + 20$.

28. Using laws of exponents simplify:- $\frac{2 \times 3^4 \times 2^5}{9 \times 4^2}$

29. Draw a line graph for the following:-

Side of square (in cm)	10	20	25	30	40
Perimeter(in cm)	40	80	100	120	160

30. Draw a pie chart showing the following information. The table shows the colours preferred by a group of people.

Colours	Number of people
Blue	18
Green	9
Red	6
Yellow	3
Total	36
