



INDIAN SCHOOL DARSAIT
HALF YEARLY EXAMINATION, SEPTEMBER 2018
MATHEMATICS
SAMPLE PAPER



Class: VIII

Max. Marks: 80
Time: 3 Hours

General Instructions:

- ❖ All questions are compulsory.
- ❖ The question paper consists of 30 questions divided into 4 sections- A, B, C and D.
Section A consists of 6 questions of 1 mark each. **Section B** consists of 6 questions of 2 marks each.
Section C consists of 10 questions of 3 marks each. **Section D** consists of 8 questions of 4 marks each.
- ❖ There is no overall choice in the question paper.
- ❖ Use of calculator is not permitted.

SECTION A

Question numbers 1 to 6 carry 1 mark.

1. By what number should we multiply $\frac{3}{5}$ so as to get -1 . 1
2. Find the solution of the equation $3x + 4 = 49$. 1
3. Find the measure of each exterior angle of a regular hexagon. 1
4. The measures of two adjacent angles of a parallelogram are in the ratio 3 : 2. Find the measure of each of the angles. 1
5. List the outcomes in an experiment of tossing 2 coins together. 1
6. List out the square numbers lie between 16 and 81 .. 1

SECTION B

Questions 7 to 12 carries 2 marks each

7. The product of two rational numbers is $\frac{-16}{9}$. If one of the numbers is $\frac{-4}{3}$, find the other. 2
8. Solve $\frac{3x+5}{3x+4} = 5$. 2
9. Find the measure of the four angles of a quadrilateral if they are in the ratio 1:2:3:4. 2
10. The marks obtained in Mathematics by 40 students of a class in an examination are: 2
3, 20, 13, 1, 21, 13, 3, 23, 16, 13, 5, 24, 15, 7, 17, 21, 7, 15, 5, 23, 2, 12, 20, 2, 10, 16, 23, 10, 18, 18, 12, 18, 6, 9, 7, 3, 5, 16, 8 and 8.
Present the data in the form of a grouped frequency distribution, using class intervals of equal size, one of the class intervals being 5-10.
11. Numbers 1 to 20 are written on slips kept in a box and mixed well. One slip is chosen from the box without looking into it. What is the probability of 2
i) getting a prime number ii) getting a one digit number

- 12 Find the smallest number by which 3250 must be subtracted to get a perfect square. Also , find the square root of the perfect square so obtained. 2

SECTION C

Questions 13 to 22 carries 3 marks

13. Name the property used : 3

i) $\frac{3}{5} \times 1 = 1 \times \frac{3}{5} = \frac{3}{5}$

ii) $\frac{-3}{5} + \frac{7}{5} = \frac{7}{5} + \frac{-3}{5}$

iii) $\frac{4}{5} \times \left(\frac{1}{6} \times \frac{3}{5} \right) = \left(\frac{4}{5} \times \frac{1}{6} \right) \times \frac{3}{5}$

- 14 What should be subtracted from $\left[\frac{3}{4} + \frac{1}{3} - \frac{4}{5} \right]$ to get 1 ? 3

15. Solve for p 3

$$5(2p - 1) + 3(4p + 3) = 5(4p - 1)$$

16. Solve for x : 3

$$\frac{x-4}{2} - \frac{x+3}{5} = 5$$

17. Find the measure of an interior angle of a regular polygon having 15 sides. 3

18. In quadrilateral ABCD, AB is parallel to DC , $\angle DAB = 120^{\circ}$ and $\angle ABC = 110^{\circ}$. Find the measure of $\angle C$ and $\angle D$. 3

19. Construct a Quadrilateral ABCD in which AB = 4cm, BC= 3.8cm, AD = 3cm, diagonal AC= 5cm and diagonal BD = 4.6cm. 3

20. Given below is a table which shows the year wise strength of a school. 3

Year	2005-06	2006-07	2007-08	2008-09	2009-10
No. of students	800	975	1100	1400	1625

Represent the above data by a histogram.

21. Find the smallest number by which 1280 must be multiplied to get a perfect square. Also, find the square root of the perfect square so obtained. 3

22. Form a Pythagorean triplet whose one member is 16. 3

SECTION D

Questions 23 to 30 carries 4 marks each

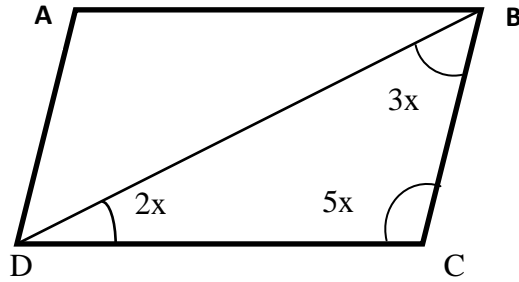
23. Find $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{14} - \frac{3}{7} \times \frac{3}{5}$. 4

24. The number of boys and girls in a class are in the ratio 5 : 4. If the number of boys is 9 more than the number of girls , find the total number of children in the class. 4

25. The denominator of a rational number is greater than its numerator by 3. If 3 is subtracted from the numerator and 2 is added to its denominator , the new number becomes 1/5. Find the original number. 4

26. Find the four angles A, B, C and D of the parallelogram ABCD.

4



27. The data on the mode of transport used by 720 students are given below:

4

Mode of transport	Bus	Cycle	Train	Car	Scooter
No. of students	120	180	240	80	100

Represent the above data by a pie chart.

28. Construct a Quadrilateral ABCD in which $AB = 5.5\text{cm}$, $BC = 3.5\text{ cm}$, $\angle B = 105^\circ$, $\angle A = 60^\circ$ and $\angle D = 90^\circ$.

4

29. Find the smallest number by which 6750 is to be divided to obtain a perfect cube. Also find the cube root of the number so obtained.

30. A society collected Rs. 8836, each member contributing as many rupees as there were members.

4

(i) Find the number of members of the society.

(ii) Society decided to contribute half of the amount they collected to an oldage home to help the poor. Find the amount .

(iii) What value is depicted in this action?

XXXXXXXXXXXXXXXXXXXX