



INDIAN SCHOOL DARSAIT

Half yearly examination 2017

Sample paper -1

Mathematics –class VIII

General Instructions

Time-3 hours

- (i) All questions are compulsory.
- (ii) Calculations should be shown in a working column on the right hand side.
- (iii) **Section A: Questions 1- 6 carry 1 mark each.**
Section B: Questions 7-12 carry 2 marks each.
Section C: Questions 13-22 carry 3 marks each.
Section D: Question 23-30 carries 4 marks.

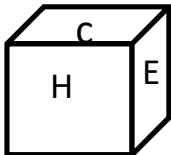
Section – A

Questions 1-10 carry 1 mark each.

1. Name the rational number that does not have a reciprocal. 1
2. What will be the product if 100 is multiplied by the additive identity of rational numbers ? 1
3. Find the solution of the equation $3x = 45$. 1
4. One angle of a parallelogram is 70° . Find its opposite angle and the adjacent angle. 1
5. A window frame has one diagonal longer than the other. Is the window frame a rectangle? Why or why not? 1
6. Find the measure of each exterior angle of a regular hexagon. 1
7. What is the total sum of all central angles of a pie chart? 1
8. List out the square numbers lie between 16 and 81. 1
9. Find the value of x, if $x^2 = 144$. 1
10. What will be the unit digit of the cube of a number ending with 4? 1

Section – B

Questions 11-19 carry 2 marks each.

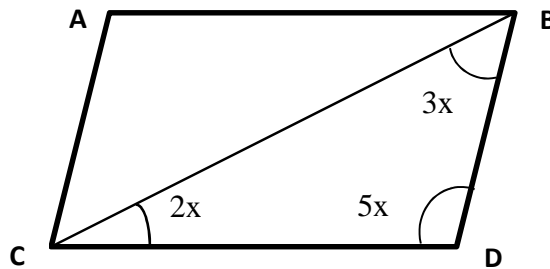
11. Find $\frac{2}{5} \times \frac{-8}{7} - \frac{1}{1} - \frac{3}{7} \times \frac{3}{5}$. 2
12. The product of two rational numbers is $\frac{-1}{9}$. If one of the numbers is $\frac{-4}{3}$, find the other. 2
13. Solve $\frac{3x+5}{3x+4} = 5$. 2
14. Find the measure of the four angles of a quadrilateral if they are in the ratio 1:2:3:4. 2
15. Is it possible to construct a quadrilateral PQRS in which PQ = 5cm, QR = 7.5cm, $\angle A = 80^\circ$, $\angle B = 140^\circ$ and $\angle C = 150^\circ$. If not, give reason. 2
16. The marks obtained in Mathematics by 40 students of a class in an examination are: 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. 2
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.
17. Instead of numbers, the letters in the word CHANCE were stuck on a die. Find the probability of rolling: 2
- (i) Letter H
 - (ii) a vowel
 - (iii) a consonant
 - (iv) any letter except E
- 
18. Find a Pythagorean triplet in which one member is 12. 2
19. A square park has area 3969 m². What is the length of the side of the park? 2

Section – C

Questions 20-25 carry 3 marks each.

20. Solve: 3
- $$4(x+3) - 2(x-1) = 3x+3$$
21. Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3 and 4 respectively, they add up to 74. Find these numbers. 3

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



3

23. Construct a quadrilateral ABCD in which BC= 4.2 cm, CA= 5.8 cm, AD= 4.7 cm, AB= 5.2 cm and BD= 6.7 cm.

3

24. The distribution of weight (in Kg) of 100 people is given below :

Weight (in Kg)	40-45	45-50	50-55	55-60	60-65	65-70	70-75
Frequency	10	25	27	16	10	7	5

3

Draw a histogram to represent the above data.

25. 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.

3

Section – D

Question 26 carries 4 marks.

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

- (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?

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