



INDIAN SCHOOL AL MAABELA
(ISO 9001:2015 CERTIFIED INSTITUTION)
SAMPLE QUESTION PAPER 2019-'20
MATHEMATICS

ISAM/FR/MDL/QP/02

Class: VIII

Max. Marks: 80

Time: 3 Hours

General Instructions:

- All questions are compulsory
- The question paper consists of 40 questions divided into four sections A, B, C and D. Section A comprises of 20 questions of 1 mark each, Section B comprises of 6 questions of 2 marks each, Section C comprises of 8 questions of 3 marks each and Section D comprises of 6 questions of 4 marks each.
- Internal choice has been provided in Section B and Section D.
- Use of calculators is not permitted. Use of whiteners are not allowed.
- Only the answers are to be written in the answer sheet with correct question number.

SECTION A

CHOOSE THE CORRECT ANSWER:

1. Sum of interior angles of a regular polygon of n sides is _____ 1
(a) $n \times 90^\circ$ (b) $(n-2) \times 90^\circ$ (c) $n \times 180^\circ$ (d) $(n-2) \times 180^\circ$
2. Product of two rational numbers is 1, if one of them is $\frac{10}{3}$ then other is _____ 1
(a) $\frac{3}{10}$ (b) $\frac{-3}{10}$ (c) $\frac{10}{3}$ (d) $\frac{-10}{3}$
3. The sum of two numbers which are in the ratio of 3 : 5 is 24. The numbers are _____ 1
(a) 8, 13 (b) 7, 14 (c) 9, 15 (d) 6, 15
4. The probability that an even prime number is shown when a die thrown is ----- 1
(a) $\frac{1}{6}$ (b) $\frac{1}{2}$ (c) 1 (d) $\frac{1}{3}$
5. The property under multiplication used in _____ 1
 $\frac{-9}{11} \times \frac{11}{9} = \frac{11}{9} \times \frac{-9}{11}$ is
(a) commutativity (b) associativity (c) closure (d) distributivity
6. A pentagon has _____ diagonals. 1
(a) 10 (b) 9 (c) 5 (d) 4
7. The difference between the lower and upper limit of a class is called _____ 1
(a) Class size (b) frequency (c) range (d) data
8. The product of a rational number and its reciprocal is equal to ----- 1
(a) 0 (b) 2 (c) 1 (d) -1
9. Which is the smallest 3-digit perfect cube? _____
(a) 125 (b) 343 (c) 729 (d) 512

10. What will be the unit digit of the cube of a number ending with 2?
 a) 8 b) 4 c) 2 d) 6
11. The square root of 12.25 is -----
 a) 3.5 b) 2.5 c) 35 d) 25
12. Which is the greatest 4-digit perfect square?
 a) 9999 b) 9990 c) 9800 d) 9801
13. Diagonals of a parallelogram ----- each other
 a) Bisect b) equal to c) perpendicular to d) none of these
14. A parallelogram whose all sides are equal is called -----
 a) Square b) rhombus c) rectangle d) trapezium
15. ----- is the multiplicative identity for rational numbers.
 a) 1 b) 0 c) -1 d) $\frac{1}{2}$
16. The cube root of 3375 is -----
 a) 12 b) 15 c) -15 d) -11
17. The probability of a sure event is -----
 a) 2 b) 1 c) 0 d) ∞
18. The sum of exterior angles of a polygon with 8 sides is -----
 a) 180 b) 360 c) 540 d) 90
19. If the sum of the interior angles of a regular polygon is 720, then the number of its sides is ---
 -----.
20. The solution of the equation $4x - 8 = 12$ is -----
 (a) 10 (b) 8 (c) 5 (d) 12

SECTION B

21. Find two rational number between $\frac{1}{4}$ and $\frac{1}{2}$. 2
- Sum of three consecutive integers add up to 51. What are the integers? 2
22. 2
23. The measurement of one of the angles of a parallelogram is 110° . What are the measures of the other angles? 2
24. Represent $\frac{-4}{3}$ on the number line. 2
25. The ages (in years) of 30 students of class VIII are as under: 2
 12,13,12,14,14,12,14,13,16,13,15,14,16,13,13,14,16,15,13,14,13,13,14,12,14,12,15,15,13,16.
 Prepare a frequency distribution table.

OR

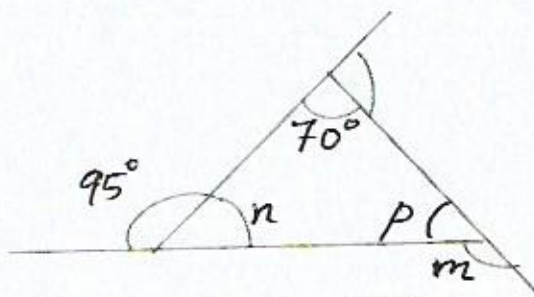
A bag contains 5 red balls, 4 black balls and 3 white balls. A ball is drawn at random from the bag. What is the probability that the ball drawn is: (a) red (b) black

26. Solve $3(x - 3) = 5(x - 5)$ OR Solve $2x - 3 = x + 2$ 2

SECTION C

27. Simplify : $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{4} - \frac{3}{7} \times \frac{3}{5}$ 3

28. Find the unknown angles. 3



29. Arjun is twice as old as Shriya. Five years ago his age was three times Shriya's age. Find their present ages. 3

30. Marks of 30 students in Mathematics test are given below: 52,61,43,28,10,75,90,82,99,15,45,89,65,75,60,25,30,75,85,45,85,45,75,15,75,65,95,10,25,75. 3

(a) What is the highest and the lowest score?

(b) If 40 is the qualifying marks, how many students have failed?

(c) How many students scored 75 or more ?

31. Solve $\frac{4x+8}{5x+8} = \frac{5}{6}$ 3

32. The difference between two whole numbers is 66. The ratio of the numbers is 2 : 5, what are the numbers. 3

OR

The measures of two adjacent angles of a parallelogram are in the ratio of 3 : 2 find the measure of each angles of the parallelogram.

33. Construct a rhombus whose diagonals are 5.4cm and 6.6 cm long 3

OR

Construct a rectangle BEST where ES = 4cm and ST = 6cm

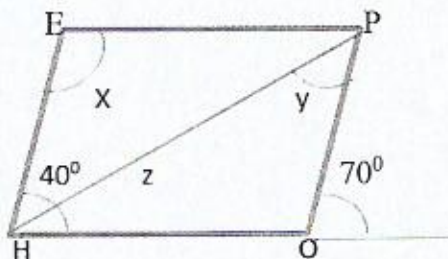
34. Is 2352 a perfect square? If not, find the smallest multiple of 2352 which is a perfect square. Find the square root of the new number. 3

OR

Find the square root of 7921 by division method.

SECTION D

35. The figure HOPE is a parallelogram. Find the angles measures x, y and z. State the properties you use to find them. 4



36. The following table shows the favorite sports of 180 senior students in a school. Draw a pie-chart to represent the data. 4

Sport	Cricket	Football	Tennis	Basketball	Swimming
No. of Students	60	50	30	20	20

37. Construct a quadrilateral ABCD in which $AB = BC = 4\text{cm}$, $AD = CD = 5\text{cm}$ and $\angle B = 120^\circ$ 4

38. Solve : $\frac{x}{2} - \frac{1}{5} = \frac{x}{3} + \frac{1}{4}$ 4

39. Draw a histogram for the following data: 4

Class Interval	110-120	120-130	130-140	140-150	150-160
Frequency	25	15	20	45	5

OR

Students in different subjects are given below

Subject	English	Hindi	Math	Science	Social
Marks	60	45	70	80	56

Draw bar graph for the given information.

40. a) Find the smallest number by which 192 must be divided to obtain a perfect cube. 4
b) Find the cube root of 110592.

OR

- a) Find a Pythagorean triplet in which one member is 12.
b) Area of a square plot is 2304m^2 . Find the side of the square plot.