



DELHI PUBLIC SCHOOL, GWALIOR

(Under the Aegis of DPS Society, New Delhi)

MODEL TEST PAPER

CLASS – VIII

SUBJECT – MATHEMATICS

Time: 3 hrs.

M.M.: 80

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper consists of 40 questions divided into four sections A, B, C & D.
- (iii) 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.
Section D comprises of 6 questions of 4 marks each.
- (iv) There is no overall choice. However internal choices has been provided in some questions.
- (v) Use of calculators is not permitted.

Section - A

Multiple Choice Questions:

[1x10=10]

1. The smallest number by which 162 should be multiplied to make it a perfect square is
(a) 4 (b) 3 (c) 2 (d) none of these
2. Cube root of $1\frac{127}{216}$ is
(a) $\frac{6}{7}$ (b) $\frac{-7}{6}$ (c) $1\frac{1}{6}$ (d) none of these
3. The sum of all exterior angles of a pentagon is
(a) 590° (b) 360° (c) 180° (d) none of these
4. In a rhombus ABCD, diagonal AC and BD are respectively 8cm and 6cm, the length of each side of rhombus is
(a) 7 cm (b) 5 cm (c) 6 cm (d) none of these
5. What should be added to twice the rational number $\frac{-7}{3}$ to get $\frac{3}{7}$?
(a) $\frac{58}{21}$ (b) $\frac{29}{21}$ (c) $\frac{89}{23}$ (d) none of these
6. Product of rational number $\frac{-2}{5}$ and its additive inverse is
(a) $\frac{-4}{25}$ (b) 1 (c) 0 (d) $\frac{-25}{4}$
7. If the sum of three consecutive integers is 51, then the largest integer is
(a) 17 (b) 16 (c) 18 (d) 19

8. Probability of getting exactly 2 heads when three coins are tossed together is _____
 (a) $\frac{2}{8}$ (b) $\frac{3}{8}$ (c) $\frac{1}{4}$ (d) $\frac{1}{8}$
9. Area of a square field is 961 cm, then length of its side is _____.
 (a) 31 (b) 32 (c) 33 (d) 30
10. $0 \div \frac{2}{3}$ is equal to
 (a) 0 (b) 1 (c) $\frac{3}{2}$ (d) not defined

Fill in the blanks: (Q. 11 to Q.15)

[1x5=5]

11. Negative of a rational number is called its _____.
12. We can divide both sides of an equation by the same _____ number.

OR

Cube of any odd number is _____.

13. A number ending in _____ is never a perfect square.
14. A polygon in which each interior angles is less than 180^0 is called a _____.
15. The mid points of the class interval is called _____.

Answer the following questions (Q.16 to Q.20)

[1x5=5]

16. What is the probability of an impossible event?
17. Write the multiplicative inverse of $\frac{1}{a-1}$
18. Express 121 as the sum of 11 odd natural numbers.
19. Evaluate : $\sqrt[3]{216}$

OR

$$\sqrt{625}$$

20. Solve : $x + 3 = \frac{9}{2}$

Section - B

21. Write four rational numbers less than 2. **[2]**
22. Solve: $8x + 4 = 3(x-1)$ **[2]**
23. Find the measure of an exterior angle of a regular polygon of 9 sides. **[2]**

OR

Find the number of sides of a regular polygon whose each exterior angle is 45^0 .

24. A bag has 4 red balls and 2 white balls. A ball is drawn from the bag without looking into the bag. What is the probability of getting a red ball? Is it more or less than getting a white ball? [2]

25. Name the quadrilaterals whose: [2]
 (i) Diagonals bisect each other at 90° .
 (ii) Opposite sides are equal.

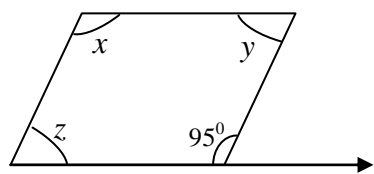
26. Evaluate : $(337)^2 - (336)^2$ [2]

OR

Evaluate : (49×51)

Section - C

27. Find z , x and y for the following parallelogram: [3]



OR

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

28. Represent $\frac{-3}{5}$, $\frac{2}{5}$, $\frac{4}{5}$, $\frac{8}{5}$ on the number line. [3]

29. Insert 6 rational numbers between $\frac{2}{3}$ & $\frac{4}{5}$. [3]

OR

Evaluate by using properties:

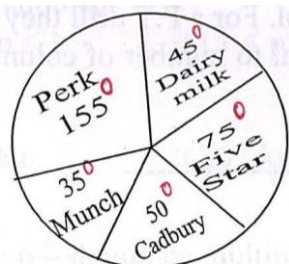
$$\frac{-2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{6}$$

30. Three consecutive integers add up to 51. What are these integers? [3]

31. Construct a quadrilateral ABCD, given that: [3]
 BC = 4.5cm, AD = 5.5 cm, CD = 5 cm, diagonal AC = 5.5 cm and diagonal BD = 7 cm.

32. Three times the reciprocal of a rational number equals 2 times the reciprocal of 19. Find the number. [3]

33. A survey was made to find the brand of chocolate liked by 540 children. [3]



1. Find the number of children who like Dairy Milk.
2. How many more children are there who like Perk than Munch?

34. Write a Pythagorean triplet whose smallest member is 8. [3]

OR

A gardener has 2025 plants. He wants to plant these in such a way that the number of rows and the number of columns remain same. Find the number of rows and the number of plants in each row.

Section - D

35. Construct a rectangle with adjacent sides of length 5 cm and 4 cm. [4]

OR

Construct a quadrilateral ABCD, where $AB = 4\text{cm}$, $BC = 5\text{cm}$, $CD = 6.5\text{cm}$, $\angle B = 105^\circ$ and $\angle C = 80^\circ$.

36. Draw a Histogram for the following frequency distribution table: [4]

Class interval	0-10	10-20	20-30	30-40	40-50	50-60	Total
Frequency	2	10	21	19	7	1	60

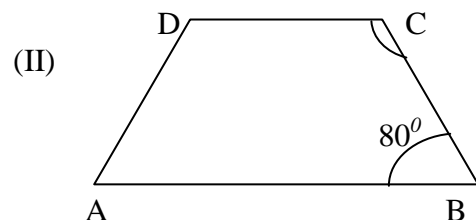
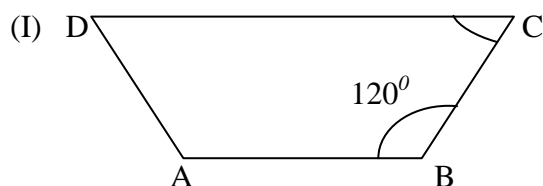
37. Find the least number that must be added to 1300 so as to get a perfect square. Also find the square root of the perfect square. [4]

OR

Find the smallest square number that is divisible by each of the number 4, 9 and 10.

38. Is 53240 a perfect cube? If not, then by which smallest natural number should 53240 be divided so that the quotient is a perfect cube? [4]

39. Find $m \angle C$ in the given fig. if $AB \parallel CD$. [4]



40. There are 500 children in school. For a P.T drill they have to stand in such a manner that the number of rows is equal to number of columns. How many children would be left out in this arrangement? [4]

OR

In an auditorium, the number of rows is equal to the number of chairs in each row. If the capacity of the auditorium is 2025. Find the number of chairs in each row.

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