

SPECTRA PRACTICE PAPER(2024-25)

SPECTRA CLASSES

CLASS – 6TH

SUBJECT – MATHEMATICS

TIME – 3 HR.

MM: 80

General Instruction:

1. This question paper consists of 38 questions. All questions are compulsory.
2. This question paper is divided into five Sections - A, B, C, D and E.
3. Section A Question numbers 1 to 18 are multiple choice questions (MCQs) and questions numbers 19 and 20 are Assertion - Reason based questions of 1 mark each.
4. Section B, Question numbers 21 and 25 are very short answer (VSA) type questions. Carrying 2 marks each.
5. Section C, Question numbers 26 and 31 are short answer (SA) type questions. Carrying 3 marks each..
6. Section D, Question numbers 32 and 35 are long answer (LA) type questions. Carrying 5 marks each.
7. Section E, Question numbers 36 and 38 are case-study based integrated question carrying 4 marks each.
9. Draw neat diagrams wherever required. .
10. Use of calculators is NOT allowed.

SECTION - A

1. Find the value of questions marks (?)

8	4	9
2	8	4
3	7	8
14	60	?

- (a) 41 (b) 49 (c) 40 (d) 38
2. Two complementary angles are in the ratio 1:2, the smaller angle is :
(a) 90° (b) 60° (c) 30° (d) 120°
3. Subtract (-6) from (-11) .
(a) 17 (b) -5 (c) -17 (d) 5
4. A regular octagon has :
(a) 2 lines of symmetry (b) 6 lines of symmetry
(c) eight lines of symmetry (d) one line of symmetry
5. The instrument to draw a circle is
(a) Divider (b) protector (c) ruler (d) compasses
6. Which of the following alphabets has a vertical line of symmetry?
(a) B (b) E (c) M (d) Q
7. Seema is talking with Neha in secret language. The text below shows the message they exchanged. What did Seema and Neha talk?
Seema : ‘ THAW LLIW UOY TIFG NAMUS?’
Neha: *I KNIHTI LLIW TEG REH A S5ERD.”

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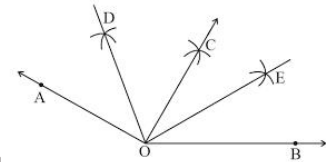
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- (a) Seema : “WHAT IS KEPT IN THE SHOP?”
Neha : “ I THINK I WILL SET HER A BOOK.”
- (b) Seema : “WHAT WILL YOU SIFT SUMAN?”
Neha: “ I THINK IT IS A SOFT DRINK.”
- (c) Seema : “WHAT WILL YOU GIFT SUMAN?”
Neha : “I WILL GET HER A DOLL.”
- (d) Seema : “WHAT IS KEPT IN THE SHOP?”
Neha : “ I THINK IT IS A SOFT DRINK.”

8. The least integer lying between -10 and -15 is
(a) -14 (b) -11 (c) -15 (d) -10

9. Angle AOB = 120° , is divided into four equal parts. The measure of angle COA is :

- (a) 45° (b) 90° (c) 60° (d) 30°



10. Choose the correct fraction : $\frac{3}{5}$

- (a) Decimal and Vulgar (b) Proper and Decimal
(c) Improper (d) Vulgar and Proper

11. How many stones 20 cm × 30 cm size will be placed on the square floor of the 3m side?
(a) 225 (b) 150 (c) 25 (d) 100

12. is the factor of 50.

- (a) 10 (b) 7 (c) 15 (d) 3

13. Steve conducts a survey of 15 villages of locality and find out the number of teachers in each village. The observations are the following :

3, 3, 3, 2, 2, 1, 2, 3, 4, 4, 4, 4, 4, 1, 1

Which is correct frequency table?

- (a) (b)

Number of Teachers in a village	Tally Marks	Frequency
1		3
2		3
3		4
4		5
Total		15

Number of Teachers in a village	Tally Marks	Frequency
1		3
2		3
3	/	4
4		5
Total		15

- (c) (d)

Number of Teachers in a village	Tally Marks	Frequency
1		3
2		3
3		4
4	/	5
Total		15

Number of Teachers in a village	Tally Marks	Frequency
1	/	3
2		3
3		4
4	/	5
Total		15

14. Arranges the following numbers in descending order : 5000, 7500, 85400, 7861
(a) 85400, 7861, 5000, 7500
(b) 85400, 7861, 7500, 5000
(c) 7861, 85400, 7500, 5000
(d) 5000, 7500, 7861, 85400
15. At 3:25, the smaller angle formed between the two hands of a clock is
(a) Right (b) Obtuse (c) Acute (d) Complementary
16. A number is divisible by 4 if its
(a) Last digit is 0 (b) last two digits are divisible by 4
(c) last digit is 4 (d) last digit is 8
17. The largest 4-digit and smallest 4-digit numbers formed by using the digits 5, 0, 2, 6 (each digit used only once) respectively are
(a) 6520, 0256 (b) 0256, 5620
(c) 2065, 2060 (d) 6520, 2056
18. An improper fraction can be written as a combination of a whole and a part, and such a fraction is then called fractions.
(a) Like (b) Improper (c) Mixed (d) Proper
19. Assertion : The cost of tiling a rectangular hall of dimensions 11.7m by 9.5m, if the rate of tiling is rupees 50 per m^2 is rupees 5,557.50.
Reason : To find the cost of levelling a field, we calculate the perimeter of that field.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true and R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.
20. Assertion (A) : Raw data should be arranged in tabular form for its representation.
Reason (R) : Representation through bar graphs and pictographs is less efficient or organized.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true and R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

Section -B

This section consists of 5 questions of 2 marks each.

21. Find the H.C.F of the numbers : 27, 63
22. Write the smallest and the largest numbers which are approximate to 130.

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23. Match the following :

(a) Two angles whose sum is 90 degree	(i) Triangle
(b) Two angles whose sum is 180 degree	(ii) Degree
(c) An angle is measured in	(iii) Supplementary
(d) A closed figure having 3 sides , 3 vertices and 3 angles	(iv) Complementary

24. Write $\frac{3}{4}$ as a fraction with denominator 44.

25. Draw a line segment OA = 5 cm. Use set-squares to construct angle AOB = 60° such that OB = 3 cm, Join A and B, then measure the length of AB.

Section - C

This section consists of 6 questions of 3 marks each.

26. In a quiz contest, group A scored -35, 8, 0 and group B scored -8, 0, 35 in three successive rounds.

Which group scored more?

27. Show that the following letters have rational symmetry of order 2.

S X Z

28. Simplify : $4\frac{3}{5} - 2\frac{7}{9} - 1\frac{2}{15} - \frac{2}{15}$.

29. Rohit runs on the path of square park with side 56cm. How much distances does he cover if he takes 3 rounds of the park.

30. Dhaval has a 1-week vacatin. He solves 10 sums on 1st day, 16 sums on 2nd day, 22 sums on 3rd day. If this pattern continues the number of sums Dhaval will solve on 4th, 5th, 6th, and 7th day?

31. Numbers of persons in various age groups in a town is given in the following table:

Age Group	1-14	15-29	30-44	45-59	60-74	75 and above
Number of persons	2 lakhs	1 lakh 60 thousands	1 lakh 20 thousands	1 lakh 20 thousands	80 thousands	40 thousands

Draw a bar graph to represent the above information and which two age groups have same population?

Section - D

This section consists of 4 questions of 5 marks each.

32. Form the smallest and the greatest 6-digit numbers using the digits 2, 0, 7, 8, 9 and 5 without repetition.

33. What is the heaviest standard weight which a vegetable seller must have with him to weigh 1.5 Kg, 3 Kg, and 3.5 Kg?

34. A piece of string is 36cm long. What will be the length of each side, if it is used to form:
 (a) A square (b) A triangle with all the sides of equal length, and
 (c) A hexagon (a six-sided closed figure) with sides of equal length?

35. Arrange fractions in ascending order :

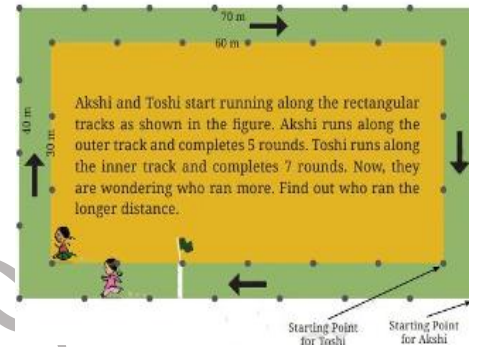
$$\frac{2}{3}, \frac{1}{6}, \frac{5}{9}, \frac{7}{12}$$

Section - E

This section consists of 3 Case - Study Based Questions of 4 marks each.

36. Read the text carefully and answer the questions :

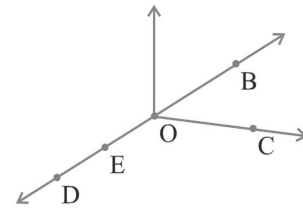
Each track is a rectangle . Akshi’s track has length 70 m and breadth 40 m. Running one complete round on this track would cover 220 m , i.e, $2 \times (70+40)$ m. This is the distance covered by Akshi in one round.



- (i) Find out the total distance Akshi has covered in 5 rounds.
- (ii) Find out the total distance Toshi has covered in 7 rounds. Who ran a longer distance?

37. In the given figure, name :

- (a) Five points
- (b) A line
- (c) Four rays
- (d) Five line segments



38. Tanishka made a pictograph given below to show the number of cars washed of a car washing station during three days of the week

From the pictograph find that:

- a) How many cars were washed on Friday, Saturday, and Sunday?
- b) On which day maximum number of cars were washed at the station?
- c) On which day the minimum number of cars were washed at the station?
- d) How many cars were washed on Saturday than on Friday?

Days	Number of cars washed	One = 5 cars
Friday		
Saturday		
Sunday		