

SPECTRA SAMPLE PAPER 2025-26
SPECTRA CLASSES
Class 6th (Mathematics)

Maximum Marks: 80

Time Allowed: 3 hours

General Instructions

1. This paper contains 38 questions divided into Sections A–E.
 2. All questions are compulsory.
 3. Section A: Q1–18 are MCQs, Q19–20 are Assertion–Reason (1 mark each).
 4. Section B: Q21–25 are VSA (2 marks each).
 5. Section C: Q26–31 are SA (3 marks each).
 6. Section D: Q32–35 are LA (5 marks each).
 7. Section E: Q36–38 are Case-Study questions (4 marks each).
 8. Calculators are not allowed.
 9. Draw diagrams neatly wherever required.
-

SECTION – A (1 Mark Each)

Multiple Choice Questions (Q1–18)

1. Find the missing number:

6	4	30
3	5	24
8	2	20
?	7	56

- (a) 8 0(b) 6 (c) 7 (d) 9
2. Two supplementary angles are in ratio 5:4. The smaller angle is:
(a) 80° (b) 100° (c) 60° (d) 45°
3. Evaluate: $-15 - (-9)$
(a) -24 (b) 6 (c) 3 (d) -6
4. A regular pentagon has
(a) 5 lines of symmetry (b) 4 (c) 3 (d) 1
5. The instrument used to draw parallel lines is:
(a) Divider (b) Set-square (c) Ruler (d) Compass
6. Which alphabet has **no symmetry**?
(a) K (b) H (c) X (d) T
7. Which of the following is the least integer?
(a) -4 (b) -10 (c) -15 (d) -9

Centre: Gole Market & Minto Road Complex, New Delhi

Phone: 9650618171, 9013160531, 9899349601

Web: www.spectraclasses.com, e-mail: info@spectraclasses.com

8. Angle BOA = 240° . Reflex angle at AOB is:
(a) 120° (b) 60° (c) 180° (d) 90°
9. Choose the correct fraction:
 $\frac{11}{6}$ is
(a) Proper (b) Improper (c) Mixed (d) Decimal
10. How many squares of side 15 cm can fit in a square floor of side 90 cm?
(a) 36 (b) 25 (c) 49 (d) 16
11. 30 is a factor of:
(a) 150 (b) 90 (c) 55 (d) 45
12. Arrange in descending order: 7600, 6700, 7060, 670
(a) 7600, 7060, 6700, 670
(b) 7060, 7600, 6700, 670
(c) 7600, 6700, 7060, 670
(d) 7060, 6700, 7600, 670
13. 12:18 in simplest form is:
(a) 3:2 (b) 2:3 (c) 4:5 (d) 6:3
14. The sum of angles of a quadrilateral is:
(a) 180° (b) 270° (c) 360° (d) 540°
15. The smallest prime number is:
(a) 0 (b) 2 (c) 1 (d) 3
16. A number is divisible by 6 if:
(a) It is even (b) Sum of digits is divisible by 3
(c) Both a & b (d) None
17. The successor of 8051 is:
(a) 8150 (b) 8052 (c) 8050 (d) 8152
18. Which of these is a **closed figure**?
(a) Line (b) Ray (c) Angle (d) Circle

Assertion-Reason (Q19-20)

19. **Assertion (A):** 60 is divisible by 10.
Reason (R): A number ending with zero is divisible by 10.
(a) Both A and R true; R explains A
(b) Both true; R doesn't explain A
(c) A true, R false
(d) A false, R true

20. **Assertion (A):** A square has 4 equal sides.

Reason (R): All rectangles have equal sides.

- (a) Both A and R true
- (b) A true, R false
- (c) Both false
- (d) A false, R true

SECTION – B (2 Marks Each)

21. Find the HCF of 32 and 48.

22. Write smallest and largest numbers nearest to 500.

23. Convert $\frac{7}{8}$ into a decimal.

24. Match the following:

- | | |
|--------------------|------------------|
| (A) Right angle | (i) 180° |
| (B) Straight angle | (ii) 45° |
| (C) Acute angle | (iii) 90° |

25. Draw a 4 cm line segment AB. Using a compass, construct $\angle ABC = 70^\circ$.

SECTION – C (3 Marks Each)

26. Simplify:

$$3\frac{1}{2} - 2\frac{3}{4} + \frac{5}{8}$$

State which letters have **rotational symmetry of order 2**: A, H, S, X, Z.

27. A rectangular park is 80 m long and 60 m wide. Find its perimeter.

28. Ria solved 6 sums on day 1, 10 sums on day 2, 14 sums on day 3... How many sums will she solve on day 7?

29. The following table shows age groups and number of women:

Age group	Number
10–20	40
20–30	30
30–40	50
40–50	20

Draw a bar graph.

Centre: Gole Market & Minto Road Complex, New Delhi

Phone: 9650618171, 9013160531, 9899349601

Web: www.spectraclasses.com, e-mail: info@spectraclasses.com

31. Convert the following into a mixed number:

$$\frac{41}{6}$$

SECTION – D (5 Marks Each)

32. Form the smallest and greatest 7-digit numbers using digits 1, 2, 3, 4, 5, 6, 7 (no repetition).
33. A farmer has a field 65 m long and 48 m wide.
Find:
(a) Area of the field
(b) Fencing required if he puts 3 rounds of fencing
34. A piece of rope 72 cm long is cut into equal parts to form:
(a) A square
(b) A triangle with all sides equal
Find the length of each side.
35. Arrange in ascending order:

$$\frac{5}{6}, \frac{3}{4}, \frac{7}{12}, \frac{2}{3}$$

SECTION – E (Case-Study, 4 Marks Each)

36. Athletics Track Problem

A rectangular track is 80 m by 50 m.
Rahul runs 4 rounds, Meena runs 6 rounds.

- (a) Find the distance each covers.
(b) Who runs more and by how much?

37. Geometry Figure Question

In the given figure (provide your own or I can generate one):

- (a) Mark three line segments
(b) Mark two rays
(c) Mark any five points
(d) Name any two intersecting lines

38. Pictograph Question

The pictograph shows books read by students:

 = 4 books

Days	Books
Monday	
Tuesday	
Wednesday	

SPECTRA CLASSES

Centre: Gole Market & Minto Road Complex, New Delhi

Phone: 9650618171, 9013160531, 9899349601

Web: www.spectraclasses.com, e-mail: info@spectraclasses.com