

PRACTICE WORKBOOK

CLASS 10

Mathematics Basic

Accessible worked steps and short applications across the shared Class X mathematics topics. Six selected-skill units for CBSE 2026–27; Basic and Standard differ in question demand, not topic syllabus.

**6 practice units****36 tasks with answer guidance**

Name / नाम: _____

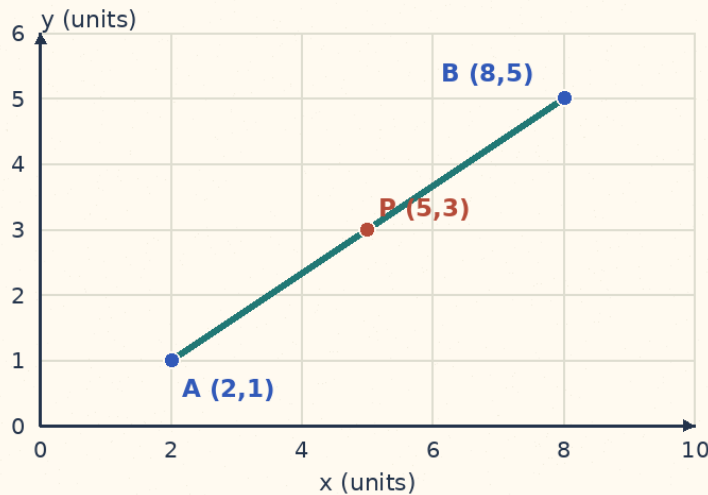
Original selected-topic practice. Use alongside school lessons and the prescribed textbook. The contents define this book's scope.

UNIT 03 · LOOK & EXPLAIN

Coordinates and similar shapes

The midpoint averages both coordinates

Worked example: A(2,1), B(8,5)



Equal scales on both axes. The two segments have the same length.

Midpoint P

$$x = (2 + 8) / 2$$

$$= 5$$

$$y = (1 + 5) / 2$$

$$= 3$$

$$AP = PB = \sqrt{13}$$

Use the labels and worked example to explain the idea. The diagram is schematic unless a scale is given.

Look, annotate and explain

Identify the parts or values that matter. Add a label or annotation to show a connection. Explain how the diagram supports the worked example, then use it with the practice on the next page.

UNIT 01 · APPLY & EXPLAIN

Number factors and polynomial zeros

4. For $x^2 - 7x + 12$, state the sum and product of its zeros. [2 marks]

5. Write a monic quadratic polynomial whose zeros are 2 and 5. [2 marks]

6. A student says the HCF of 12 and 20 is 8. Explain the error and give the correct HCF. [2 marks]

Show your thinking with a drawing, diagram or explanation.

Pause & reflect

What can I explain now? What will I try again?

☐ I tried ☐ I explained ☐ I checked



UNIT 01 · ANSWER GUIDANCE

Number factors and polynomial zeros

1. $90 = 2 \times 3^2 \times 5$.
2. $18 = 2 \times 3^2$; $30 = 2 \times 3 \times 5$. HCF = 6 and LCM = 90. Their product is $540 = 18 \times 30$.
3. $x^2 - 9 = (x - 3)(x + 3)$. The zeros are 3 and -3 .
4. Sum = $-(-7)/1 = 7$; product = $12/1 = 12$.
5. $(x - 2)(x - 5) = x^2 - 7x + 10$. Monic means the leading coefficient is 1.
6. 8 does not divide 12, so it cannot be a common factor. Since $12 = 2^2 \times 3$ and $20 = 2^2 \times 5$, the HCF is 4.

Teaching note

Check a factor by division and a zero by substitution.

Curriculum reference: https://cbseacademic.nic.in/web_material/CurriculumMain27/SecPart1/Maths_SecP1X_2026-27.pdf
Selected units; outcomes are publisher-defined. Practical, project and prescribed literature requirements must also be studied through school.