

CLASS 11

MATHS

EXTRA QUESTIONS

Class 11 Maths Chapter 9 Straight Lines – Extra Questions with Answers

Extra practice questions for Class 11 Maths Chapter 9 (Straight Lines), beyond the textbook. These Class 11 Maths Chapter 9 important questions are handy for last-minute exam practice.

Contents

Very Short Answer Questions (1 mark)

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Class 11 Maths Chapter 9 – Solutions and Notes

Extra practice questions for Class 11 Maths Chapter 9 (Straight Lines), beyond the textbook. These Class 11 Maths Chapter 9 important questions are handy for last-minute exam practice.

Very Short Answer Questions (1 mark)

Q1. Find the slope of the line through (1,2) and (3,6).

Ans: $m = (6-2)/(3-1) = 4/2 = 2$.

Q2. What is the slope of a vertical line?

Ans: Undefined.

Q3. If two lines have slopes 2 and $-1/2$, are they perpendicular?

Ans: Yes, since $2 \times (-1/2) = -1$.

Q4. Write the equation of a line with slope 3 and y-intercept 5.

Ans: $y = 3x + 5$.

Q5. Find the distance between (0,0) and (3,4).

Ans: $\sqrt{(3^2+4^2)} = \sqrt{25} = 5$.

Short Answer Questions (2–3 marks)

Q6. Find the equation of the line passing through (2,3) with slope 4, using the point-slope form.

Ans: $y-3 = 4(x-2)$, which simplifies to $y = 4x-5$.

Q7. Find the distance of the point (3,4) from the line $3x+4y-10=0$.

Ans: $d = |3(3)+4(4)-10|/\sqrt{(3^2+4^2)} = |9+16-10|/5 = 15/5 = 3$.

Q8. Find the equation of the line passing through (1,2) and (4,8), and determine its slope.

Ans: Slope $m = (8-2)/(4-1) = 6/3 = 2$. Using point-slope: $y-2 = 2(x-1)$, giving $y = 2x$.

Higher-Order Thinking / Application Questions

Q9. Two lines are given: L1 with equation $y=2x+3$, and L2 passing through (0,1) and perpendicular to L1. Find the equation of L2, showing your reasoning.

Ans: L1 has slope 2. Since L2 is perpendicular to L1, its slope must satisfy $m_1 \times m_2 = -1$, so $m_2 = -1/2$. Using point-slope form with point (0,1): $y-1 = -1/2(x-0)$, giving $y = -x/2 + 1$.

Q10. A triangle has vertices at A(0,0), B(4,0), and C(2,3). Find the length of each side using the distance formula, and determine if the triangle is isosceles.

Ans: $AB = \sqrt{(4-0)^2+(0-0)^2} = 4$. $BC = \sqrt{(2-4)^2+(3-0)^2} = \sqrt{4+9} = \sqrt{13}$. $AC = \sqrt{(2-0)^2+(3-0)^2} = \sqrt{4+9} = \sqrt{13}$. Since $BC = AC = \sqrt{13}$ (equal), the triangle is isosceles.

Class 11 Maths Chapter 9 – Solutions and Notes

For complete step-by-step answers and a quick summary, check the [Class 11 Maths Chapter 9 Solutions](#) and [Class 11 Maths Chapter 9 Revision Notes](#).

See also: [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Chapter 5](#) | [Chapter 6](#) | [Chapter 7](#) | [Chapter 8](#) | [Chapter 9](#)

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