



A Level Maths

Topic: Equation of a Straight Line

Instructions

Answer all questions. Show complete working. Use appropriate methods to find the equation of the straight line.

Practice Questions

1. Find the equation of the line passing through the point $(3, 4)$ with slope $m = 2$.
2. Find the equation of the line that passes through the points $(1, 2)$ and $(3, 6)$.
3. Find the equation of the line parallel to $y = 4x + 3$ and passing through the point $(2, 1)$.
4. Find the equation of the line perpendicular to $y = -\frac{1}{2}x + 4$ and passing through the point $(1, 3)$.
5. Determine the equation of the line that passes through the point $(0, 1)$ and has a slope of $m = -3$.
6. Find the equation of the line passing through $(2, -1)$ and $(-1, 4)$ using the two-point form.
7. Find the equation of the line with slope $m = -2$ and passing through the point $(-3, 2)$.
8. If the line passes through the points $(4, 5)$ and $(6, 9)$, find its equation.

Multiple-Choice Questions

1. The equation of the line passing through the points $(2, 3)$ and $(4, 5)$ is:
 - A. $y = x + 1$
 - B. $y = 2x - 1$
 - C. $y = x + 2$
 - D. $y = 2x + 1$
2. The slope of the line passing through the points $(1, 4)$ and $(3, 8)$ is:
 - A. 2
 - B. 1
 - C. 4
 - D. -2
3. Which of the following is the equation of the line with slope $m = 3$ and passing through the point $(0, -2)$?
 - A. $y = 3x + 2$
 - B. $y = 3x - 2$
 - C. $y = -3x + 2$
 - D. $y = -3x - 2$
4. The equation of the line with slope $m = -\frac{1}{3}$ and passing through the point $(6, 4)$ is:
 - A. $y = -\frac{1}{3}x + 4$
 - B. $y = -\frac{1}{3}x + 6$
 - C. $y = \frac{1}{3}x + 4$
 - D. $y = \frac{1}{3}x + 6$
5. The equation of the line passing through the points $(3, 5)$ and $(7, 1)$ is:
 - A. $y = -x + 8$
 - B. $y = -x + 6$
 - C. $y = x - 1$
 - D. $y = x - 5$

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