

Fill in the Blanks

Coordinate Geometry with Two Points

(x_1, y_1)	(x_2, y_2)	Gradient m	Perpendicular Gradient	Midpoint of Line	Length of Line	Equation of Line
(0, 3)	(2, 7)	$\frac{7-3}{2-0} = 2$	$-\frac{1}{2}$	(1, 5)	$\sqrt{2^2 + 4^2} = 4.47$	$y = 2x + 3$
(0, 2)	(4, 14)	$\frac{14-2}{4-0} = 3$	$-\frac{1}{3}$	(2, 8)	$\sqrt{4^2 + 12^2} = 12.65$	$y = 3x + 2$
(0, 5)	(3, 8)	$\frac{8-5}{3-0} = 1$	-1	(1.5, 6.5)	$\sqrt{3^2 + 3^2} = 4.24$	$y = x + 5$
(2, 1)	(0, 9)	$\frac{9-1}{0-2} = -4$	$\frac{1}{4}$	(1, 5)	$\sqrt{2^2 + 8^2} = 8.25$	$y = -4x + 9$
(3, 6)	(1, 10)	$\frac{10-6}{1-3} = -2$	$\frac{1}{2}$	(2, 8)	$\sqrt{2^2 + 4^2} = 4.47$	$y = -2x + 12$
(3, 3)	(2, -1)	$\frac{-1-3}{2-3} = 4$	$-\frac{1}{4}$	(2.5, 1)	$\sqrt{1^2 + 4^2} = 4.12$	$y = 4x - 9$
(3, 7)	(6, 8)	$\frac{8-7}{6-3} = \frac{1}{3}$	-3	(4.5, 7.5)	$\sqrt{3^2 + 1^2} = 3.16$	$y = \frac{1}{3}x + 6$
(5, 11)	(3, 7)	$\frac{11-7}{5-3} = 2$	$-\frac{1}{2}$	(4, 9)	$\sqrt{2^2 + 4^2} = 4.47$	$y = 2x + 1$
(4, 7) or (0, 11)	(2, 9)	$\frac{9-7}{2-4} = -1$	1	(3, 8) or (1, 10)	$\sqrt{8}$	$y = -x + 11$