

Equation of straight line

Q1. Write down the equations of these lines.

a parallel to $y = 4x - 5$ and passes through $(0, 1)$ _____

b parallel to $y = 1 - 2x + 3$ and passes through $(0, -2)$ _____

c parallel to $y = -x + 2$ and passes through $(0, 3)$ _____

Q2. Find the equation of straight line which is parallel to given line L and passes through the given point A

Parallel To line 'L'	Passes through 'A'	Equation of St. Line
$y = 2 + 3x$	$(2, 7)$	
$3x + 4y = 12$	$(-5, 3)$	
$5x - 3y = 7$	$(5, 1)$	
$3x = 2y - 7$	$(-6, 8)$	
$x + 2y - 5 = 0$	$(-4, -7)$	

Q3. Write down the equations of these lines.

a perpendicular to $y = 3x + 2$ and passes through $(0, -3)$ _____

b perpendicular to $y = -\frac{1}{3}x - 2$ and passes through $(0, 4)$ _____

c perpendicular to $y = x - 5$ and passes through $(2, 1)$ _____

Q4. Find the equation of straight line which is perpendicular to given line M and passes through the given point B

Perpendicular To line 'L'	Passes through 'B'	Equation of St. Line
$y = 2 - 5x$	$(0, 8)$	
$3x - 5y = 12$	$(2, -1)$	
$2x - 3y = 7$	$(-3, 8)$	
$5x = 2y - 7$	$(3, -7)$	
$2x + 2y - 5 = 0$	$(-6, -7)$	

Q5. A is the point (1, 5). B is the point (3, 3).

a Find the equation of the line parallel to AB and passing through (5, 9). _____

b Find the equation of the line perpendicular to AB and passing through the midpoint of AB. _____

Q6. Find the equation of the line that passes through the midpoint of AB, where A is (−5, −3) and B is (−1, 3), and has a gradient of 2. _____

Q7. Find the equation of the line perpendicular to $y = 4x - 3$, passing through (−4, 3). _____

Q8. A is the point (0, 6), B is the point (5, 5) and C is the point (4, 0).

a Write down the point where the line BC intercepts the y-axis. _____

b Work out the equation of the line AB. _____

c Write down the equation of the line BC. _____

Q9. Find the equation of the perpendicular bisector of the points A (1, 2) and B (3, 6). _____

Q10. A is the point (0, 4), B is the point (4, 6) and C is the point (2, 0).

a Find the equation of the line BC. _____

b Show that the point of intersection of the perpendicular bisectors of AB and AC is (3, 3). _____

c Show algebraically that this point lies on the line BC. _____