Parallel and Perpendicular Lines

Find the equation of the line that has:

(a) Gradient 2 and goes through (0, 5)

(b) Gradient -3 and goes through (0, 7)

(c) Gradient $\frac{2}{3}$ and goes through (0, 4)

(d) Gradient -4 and goes through (0, -1)

(e) Gradient 1 and goes through (0, -6)

Find the equation of the line that is:

(a) Parallel to the line $y = 4x + 7$ and passes through (0, 2)

(b) Parallel to the line $y = -2x + 4$ and passes through (0, 6)

(c) Parallel to the line $y = 3x + 1$ and passes through (0, -4)

(d) Parallel to the line $y = x + 6$ and passes through (0, 5)

(e) Parallel to the line $y = \frac{1}{2}x + 3$ and passes through (0, -1)

Find the equation of the line that is:

(a) Perpendicular to the line $y = 2x + 5$ and passes through (0, 7)

(b) Perpendicular to the line $y = \frac{1}{3}x + 4$ and passes through (0, -5)

(c) Perpendicular to the line $y = -5x + 1$ and passes through (0, 2)

(d) Perpendicular to the line $y = -\frac{1}{4}x + 5$ and passes through (0, -4)

(e) Perpendicular to the line $y = 3x - 1$ and passes through (0, 3)

Match the pairs of perpendicular lines.

$x = 6$	$x + y = 5$	$y = 8x - 9$
$2y = x + 4$	$2x + y = 9$	$y = -\frac{1}{8}x + 6$
$5y = 2x + 15$	$y = 0.1x + 2$	$y = -2$
$y = 33 - 10x$	$2y + 5x = 2$	$y = x + 4$