

1. Sketch the graphs for $-4 \leq x \leq 4$
 - a. $y = 3x$
 - b. $y = -2x$
 - c. $y = 4x$
 - d. $y = -3x$
 - e. $y = \frac{1}{2}x$
2. Sketch the curves for $-2 \leq x \leq 6$
 - a. $y = x + 2$
 - b. $y = -2x - 1$
 - c. $y = 3x + 2$
 - d. $y = 2 - \frac{1}{2}x$
 - e. $y = -3x - 3$
3. State the gradient for each graph
 - a. $y = \frac{1}{4}x - 3$
 - b. $y = -\frac{3}{4} + 2x$
 - c. $y = \frac{1}{2} - 3x$
 - d. $y = 2x + \frac{3}{2}$
 - e. $y = -x - \frac{2}{3}$
4. Find (i) the gradient, (ii) the x -intercept, and (iii) the y -intercept for each equation below
 - a. $4y + \frac{1}{4}x - 2 = 0$
 - b. $-3y = -2 + 2x$
 - c. $3y = 2(\frac{1}{2} - x)$
 - d. $-y - 2x + \frac{3}{2} = 0$
 - e. $-2x - \frac{2}{5} + 5y = 0$
5. Write the equation of the straight line with
 - a. gradient 2 and y -intercept 3
 - b. gradient -1 and y -intercept 2
 - c. gradient 4 and y -intercept -1
 - d. gradient $\frac{1}{2}$ and y -intercept -0.2
 - e. gradient $2\frac{1}{3}$ and y -intercept 4
6. Find the gradient between the two points given
 - a. $A(0, 2)$ and $B(2, 6)$
 - b. $P(-3, 2)$ and $Q(1, 1)$
 - c. $M(3, 4)$ and $N(2, 2)$
 - d. $X(5, -1)$ and $Y(-2, 6)$
 - e. $E(-2, -1)$ and $F(4, -3)$
7. Find the equation of the line with
 - a. a gradient of 3 that passes through the point $A(0, 2)$
 - b. a gradient of -2 that passes through the point $B(1, 1)$
 - c. a gradient of 1 that passes through the point $C(-2, 1)$
 - d. a gradient of 4 that passes through the point $D(-3, -2)$
 - e. a gradient of -1 that passes through the point $E(4, -2)$
8. Find the equation of the line between the two points given
 - a. $M(3, 1)$ and $P(2, 5)$
 - b. $S(-1, 2)$ and $T(1, 6)$
 - c. $A(3, -2)$ and $B(2, 2)$
 - d. $F(2, -1)$ and $G(-2, 0)$
 - e. $V(2, 9)$ and $W(5, -3)$
9. Find the equation of the line parallel to $y = 2x + 1$ that passes through $(2, 3)$
10. Given the equation for the line $2y + 4x - 1 = 0$ and the point $A(1, -1)$, find the line
 - a. parallel through A
 - b. perpendicular through A
11. Given the equation for the line $-2y + x - 2 = 0$ and the point $B(1, -3)$, find the line
 - a. parallel through A
 - b. perpendicular through A