Samples **Gradient and intercept SOLUTIONS**

1. Rewrite the equation as $y = mx + c$:

$$\begin{aligned} 11y - 5x + 7 &= 4 + 5x + 10y, \text{ so} \\ 11y - 10y &= 5x + 5x + 4 - 7 \\ y &= 10x - 3 \end{aligned}$$

Hence the gradient is $m = 10$ and the y-intercept is $c = -3$.

2. Rewrite the equation as $y = mx + c$:

$$\begin{aligned} 6x - 2 + 9y &= 3y - 2x - 8, \text{ so} \\ 9y - 3y &= -2x - 6x - 8 + 2 \\ 6y &= -8x - 6 \\ y &= -\frac{4}{3}x - 1 \end{aligned}$$

Hence the gradient is $m = -\dfrac{4}{3}$ and the y-intercept is $c = -1$.

3. Rewrite the equation as $y = mx + c$:

$$\begin{aligned} -3 + 2y &= -2x + 6y + 2, \text{ so} \\ 2y - 6y &= -2x + 2 + 3 \\ -4y &= -2x + 5 \\ y &= \frac{1}{2}x - \frac{5}{4} \end{aligned}$$

Hence the gradient is $m = \dfrac{1}{2}$ and the y-intercept is $c = -\dfrac{5}{4}$.