

Simplify by collecting like terms.

1. $2x^2 + 13x - 12 - 2x^2 - 3x + 5$

2. $3(a^2 - 2a + 7) - 2(a^2 - 3a - 10)$

3. $(a + 7)(3a - 1)$

Solve for the value of x .

4. $-9 = \frac{3}{4}x$

5. $\frac{2}{3}(3x - 6) = -2x$

What is the slope and y -intercept of each equation?

6. $y = -3.4x - 1.8$

7. $5x + 2y = 8$

Use pencil for graphs. Label each function with its name or equation.

8. Given the function $f(x) = \frac{2}{5}x - 5$.
- (a) Draw the function $f(x)$ on the graph below.
 - (b) Mark and label the point $P(3, 2)$ on the graph.
 - (c) A second line, $g(x)$, is perpendicular to $f(x)$ and passes through point P . Plot $g(x)$ on the graph.
 - (d) Challenge: what is the exact value of the y -intercept of $g(x)$?

