1. Factorise the expression $2x^2 - 5x + 2$

$2x^2 - 5x + 2 = (2x - 1)(x - 2)$

1. Solve the equation $2x^2 - 5x + 2 = 0$

$$2x^2 - 5x + 2 = 0$$
$$(2x - 1)(x - 2) = 0$$
$$2x - 1 = 0, \quad x - 2 = 0$$
$$x = \frac{1}{2}, \quad x = 2$$

1. Write $2x^2 - 5x + 2$ in the form $a(x - h)^2 + k$

$$2x^2 - 5x + 2 = 2\left(x^2 - \frac{5}{2}x + 1\right)$$

$$= 2\left[\left(x - \frac{5}{4}\right)^2 - \left(\frac{5}{4}\right)^2 + 1\right]$$

$$= 2\left[\left(x - \frac{5}{4}\right)^2 - \frac{25}{16} + 1\right]$$

$$= 2\left[\left(x - \frac{5}{4}\right)^2 - \frac{9}{16}\right]$$

$$= 2\left(x - \frac{5}{4}\right)^2 - \frac{9}{8}$$

$$\left(x - \frac{5}{4}\right)^2 = \left(x - \frac{5}{4}\right)\left(x - \frac{5}{4}\right)$$

$$= x^2 - \frac{5}{4}x - \frac{5}{4}x + \left(\frac{5}{4}\right)^2$$

4. Plot the graph of f(x) = 2x² - 5x + 2.

$y = 2x^2 - 5x + 2$

$x = -\frac{5}{4}$

$x = 0.5$

$x = 2$

$\left(\frac{5}{4}, -\frac{9}{8}\right)$