

Quadratic Functions

FINDING y GIVEN x

Example

If $y = 2x^2 + 4x - 5$ find the value of y when: **a** $x = 0$ **b** $x = 3$.

a When $x = 0$,

$$\begin{aligned} y &= 2(0)^2 + 4(0) - 5 \\ &= 0 + 0 - 5 \\ &= -5 \end{aligned}$$

b When $x = 3$,

$$\begin{aligned} y &= 2(3)^2 + 4(3) - 5 \\ &= 2(9) + 12 - 5 \\ &= 18 + 12 - 5 \\ &= 25 \end{aligned}$$

For each of the following functions, find the value of y for the given value of x :

a $y = x^2 + 5x - 14$ when $x = 2$

b $y = 2x^2 + 9x$ when $x = -5$

c $y = -2x^2 + 3x - 6$ when $x = 3$

d $y = 4x^2 + 7x + 10$ when $x = -2$

