

$(1, -4)$ $(2, -3)$ $(3, 4)$ $y = ax^2 + bx + c$

$y = 3x^2 - 8x + 1$

$(1, -4)$

$-4 = a(1)^2 + b(1) + c$

$-4 = a + b + c$

$4 = -a - b - c$

$-4 = 3 - 8 + c$

$-4 = -5 + c$

$+5 \quad +5$

$1 = c$

$(2, -3)$

$-3 = a(2)^2 + b(2) + c$

$-3 = 4a + 2b + c$

$4 = -a - b - c$

$1 = 3a + b$

$1 = 3(3) + b$

$1 = 9 + b$

$-8 = b$

$(3, 4)$

$4 = a(3)^2 + b(3) + c$

$4 = 9a + 3b + c$

$4 = -a - b - c$

$8 = 8a + 2b$

$-2 = -6a - 2b$

$\frac{b}{2} = \frac{2a}{2}$

$3 = a$

$(-2, -4), (1, -1) (3, 11)$

$$y = x^2 + 2x - 4$$

$(-3, 2) (1, -6) (4, 9)$

$$y = x^2 - 7$$