

Section 2: The quadratic formula

Exercise level 1

1. Without solving the equation, state how many solutions there are for each of the following quadratic equations:

(i) $3x^2 + 2x + 5 = 0$ (ii) $2x^2 - 3x - 2 = 0$
(iii) $5x^2 - 6 = 0$ (iv) $4x^2 - 8x + 4 = 0$
(v) $x^2 - 3x + 3 = 0$ (vi) $-5x^2 - 8x - 10$

2. Use the quadratic formula to solve these equations. Give your answers in exact form.

(i) $x^2 + 4x + 1 = 0$ (ii) $x^2 - 3x - 1 = 0$
(iii) $2x^2 + 2x - 3 = 0$ (iv) $3x^2 - 4x - 2 = 0$