



Algebra & Functions (Maths 201–016)

With Answers

1. Factor completely

- (2) (a) $15a^2b^4c^3 - 27a^2bc^5 + 18a^7b^4c^3$
(2) (b) $2x^3 + x^2 - 18x - 9$

2. Solve by factoring:

- (2) (a) $x^2(x + 5) = 9x + 45$
(2) (b) $3x^2 + 5x = 2$

- (3) 3. Solve by completing the square: $x^2 + 4x + 13 = 0$

4. Solve by any method:

- (2) (a) $x^2 - 6x - 7 = 0$
(2) (b) $x = \sqrt{3 - x} + 1$

Answers:

1. Factor completely

- (a) $3a^2bc^3(5b^3 - 9c^2 + 6a^5b^3)$
(b) $(2x + 1)(x - 3)(x + 3)$

2. Solve by factoring:

- (a) $-5, \pm 3$
(b) $-2, \frac{1}{3}$

3. Solve by completing the square: No solution.

4. Solve by any method:

- (a) $7, -1$
(b) 2