

SET 3: Pure Mathematics

Tutorial 5

1. Solve the following quadratic equations by factorisation:

(a) $x^2 + 6x - 27 = 0$ [**Ans.** $x = 3$ or $x = -9$]

(b) $5x^2 + 22x - 15 = 0$ [**Ans.** $x = \frac{3}{5}$ or $x = -5$]

(c) $15x^2 - 22x + 8 = 0$ [**Ans.** $x = \frac{4}{5}$ or $x = \frac{2}{3}$]

2. Solve the following quadratic equations by using the quadratic formula:

(a) $x^2 - 7x + 12 = 0$ [**Ans.** $x = 4$ or $x = 3$]

(b) $x^2 + 2x - 63 = 0$ [**Ans.** $x = 7$ or $x = -9$]

(c) $2x^2 - 19x + 42 = 0$ [**Ans.** $x = 6$ or $x = 3.5$]

(d) $40x^2 + 69x - 175 = 0$ [**Ans.** $x = 1.4$ or $x = -3.125$]

(e) $2.35x^2 - 7.21x + 3.85 = 0$ [**Ans.** $x = 2.38$ or $x = 0.69$]

(f) $0.793x^2 - 1.052x + 0.038 = 0$ [**Ans.** $x = 1.289$ or $x = 0.037$]