

Tutorial 5

1. Solve each of the following equations:

(a) $8 + x = 24$ (b) $8 + 3x = 26$ (c) $7 - 2x = 15$

2. Solve each of the following equations:

(a) $4(x + 2) = 5(x - 3)$ (b) $\frac{5}{2x + 1} = \frac{1}{3 + x}$

3. Solve the following quadratic equations:

(a) $x^2 + 12x + 27 = 0$ (b) $x^2 - 10x + 25 = 0$ (c) $2x^2 + 15x = 0$

4. Solve the equation $3x^2 - 2x - 7 = 0$.

5. Solve the equation $x^2 + 12x + 7 = 0$ by *completing the square*.

6. Solve the simultaneous equations

$$8x + 3y = 26, \quad -7x + 2y = -32$$

7. Solve the inequalities

(a) $4 - 3x \leq 2x$, (b) $|3x - 2| > 4$

8. By plotting the graph of $y = 2x^2 - 7x + 2$, find approximate solutions of the following equations:

(a) $2x^2 - 7x + 2 = 0$, (b) $2x^2 - 7x + 1 = 0$.