

**Solving equations**

1. Solve the following equations.

a)  $4x - 10 = 2$

b)  $3x - 5(3 - 2x) + 3(-2 + 4x) = 3 - 8(2 - 4x)$

c)  $0 = 4x^2 + 3x$

d)  $0 = x^2 - 4x + 4$

e)  $3x^5 - x^4 - 2x^3 = 0$

f)  $0 = -2x^2 + 3x - 2$

2. Solve the following equations.

a)  $2 - \sqrt{x} = 1$

b)  $\sqrt{x+1} = x - 1$

c)  $\sqrt{x+4} + 2 = x$

d)  $\sqrt{2x-15} = x - 7$

e)  $\sqrt{4x + \sqrt{x+5}} = \sqrt{4x+3}$

f)  $\sqrt{1 + x\sqrt{1+8x}} = x + 1$

3. Solve the following equations.

a)  $|4 - x| = 3$

b)  $|x^2 - 1| = 3$

c)  $|x^2 - 3x + 2| = 0$

d)  $\frac{|x+4|}{x+2} = \frac{x-1}{x+5}$