CSE 15 Homework 1 : Mathematical Typesetting

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Exercise 1

Solve $(x-2)(x+4) = 7$

$$x^2 + 4x - 2x - 8 - 7 = 0$$
$$x^2 + 2x - 15 = 0$$
$$(x-3)(x+5) = 0$$

Therefore $x = 3$ or $x = -55$

Exercise 2

Solve $(x-3)^2 = 4$

$$\sqrt{(x-3)^2} = \sqrt{4}$$
$$x - 3 \pm 2$$
$$x - 3 = 2$$
$$x = 5$$
$$x - 3 = -2$$
$$x = 1$$

Therefore $x = 5$ or $x = 1$

Exercise 3

Solve $\sqrt{(x-2)} + 2 = 4$

$$\sqrt{(x-2)} = 4 - 2$$
$$\sqrt{(x-2)}^2 = 2^2$$
$$x - 2 = 4$$
$$x = 6$$

Therefore $x = 6$