

Homework 1 - Mathematical Typesetting

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February 08 2020

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 $x = -5$

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 $x = 1$ or $x = 5$

Exercise 3

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

$$\sqrt{x - 2} = 2$$

$$\sqrt{x - 2}^2 = 2^2$$

$$x - 2 = 4$$

$$x = 6$$

Therefore $x = 6$