

Homework 1

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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 $x = -5$

Exercise 2

Solve $(x - 3)^2 = 4$.
 $(x - 3)(x - 3) = 4$
 $x^2 - 3x - 3x + 9 = 4$
 $x^2 - 6x + 5 = 0$
 $(x - 1)(x - 5) = 0$
Therefore $x = 5$ or $x = 1$

Exercise 3

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