

# Lös med kvadratkomplettering

$$x^2 - x - 2 = 0$$

$$x^2 - x = 2$$

$$x^2 - x + \frac{1}{4} = 2 + \frac{1}{4}$$

$$x^2 - x + \left(\frac{1}{2}\right)^2 = \frac{9}{4}$$

$$\left(x - \frac{1}{2}\right)^2 = \frac{9}{4}$$

$$x - \frac{1}{2} = \pm \frac{3}{2}$$

$$x = \frac{1}{2} \pm \frac{3}{2}$$

$$x_1 = 2 \quad x_2 = -1$$

$$x^2 - \frac{5x}{2} - \frac{3}{2} = 0$$

$$x^2 - \frac{5x}{2} + \left(\frac{5}{4}\right)^2 = \left(\frac{5}{4}\right)^2 + \frac{3}{2}$$

$$\left(x - \frac{5}{4}\right)^2 = \frac{25 + 24}{16}$$

$$x - \frac{5}{4} = \pm \sqrt{\frac{49}{16}}$$

$$x = \frac{5}{4} \pm \frac{7}{4}$$

$$x_1 = \frac{12}{4} = 3$$

$$x_2 = -\frac{2}{4} = -\frac{1}{2}$$