

$$2 \cdot 3 + 3 \cdot 2^2 - 3 \cdot \sqrt{16} = 6$$

$$2 \cdot 3 + 3 \cdot 2^2 - 3 \cdot \sqrt{16}$$

$$1 - 3^2 + \frac{10}{4} \cdot 2 + 3 \cdot 7 + 2 \cdot 4 \cdot 1 \cdot 0 + 3 = 21$$

$$\sqrt{16} \cdot \sqrt{25} - \sqrt{9} \cdot 3^2 + 2 \cdot 2 - 8 = -11$$

$$\frac{2 + 3 \cdot 2}{4} - 2^3 \cdot 1 + 4 \cdot 7 - 28 = -6$$

$$2 \cdot (3 + 2) + (4 - 3)^2 - 5 \cdot 4 = -9$$

$$-2^2 + 4 - 3 \cdot (-2)^2 + (-8) \cdot 1 + \frac{20}{-5} = -24$$

$$2 \cdot (4 - 5) + 3 \cdot (2 - 4)^2 = 10$$

$$-2 \cdot (-2 \cdot 4) + 3 \cdot (5 - 3) = 22$$

$$(2 - 3^2) \cdot (3^2 - 2) + 7^2 + \frac{8}{6 - 2} = 2$$

$$-1 \cdot (-1) - 1 \cdot (-1)^2 + 4 \cdot \sqrt{25} - 7 - (-8) = 21$$

$$\frac{1}{2} - \frac{1}{4} + \frac{1}{8} = \frac{3}{8}$$

$$\frac{2}{3} - \frac{3}{4} + \frac{5}{6} = \frac{3}{4}$$

$$\frac{1}{2} + \frac{1}{3} - \frac{3}{4} - \frac{1}{6} + \frac{9}{8} = \frac{25}{24}$$

a

$$7 \cdot \frac{2}{3} - \frac{\frac{2}{3}}{7} = \frac{32}{7}$$

$$\frac{\frac{5}{4}}{\frac{4}{3}} = \frac{15}{4}$$

Opgave 2

$$3x - 1 = 8 \xrightarrow{\text{solve}} \{x = 3\}$$

$$3x - 1 = 8$$

$$3x - 1 + 1 = 8 + 1$$

$$3x = 9$$

$$x = 3$$

$$4x - 1 = 8 \xrightarrow{\text{solve}} \left\{x = \frac{9}{4}\right\}$$

$$4x - 1 = 8$$

$$4x - 1 + 1 = 8 + 1$$

$$4x = 9$$

$$\frac{4x}{4} = \frac{9}{4}$$

$$x = \frac{9}{4}$$

$$2x + 4 = -2 - x \xrightarrow{\text{solve}} \{x = -2\}$$

$$2x + 4 = -2 - x$$

$$2x + 4 - 4 = -2 - x - 4$$

$$2x = -6 - x$$

$$2x + x = -x - 6 + x$$

$$\frac{3x}{3} = \frac{-6}{3}$$

$$x = -2$$

$$9x + 2 = 3x - 7 \xrightarrow{\text{solve}} \left\{x = -\frac{3}{2}\right\}$$

$$9x + 2 = 3x - 7$$

$$9x + 2 - 2 = 3x - 7 - 2$$

$$9x = 3x - 9$$

$$9x - 3x = 3x - 9 - 3x$$

$$6x = -9$$

$$\frac{6x}{6} = \frac{-9}{6}$$

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

$$\frac{9}{2}x - 1 = \frac{8}{3}x + 2 \xrightarrow{\text{solve}} \left\{ x = \frac{18}{11} \right\}$$

$$\frac{9}{2}x - 1 + 1 = \frac{8}{3}x + 2 + 1$$

$$\frac{9}{2}x = \frac{8}{3}x + 3$$

$$\frac{9}{2}x - \frac{8}{3}x = \frac{8}{3}x + 3 - \frac{8}{3}x$$

$$\frac{11}{6}x = 3$$

$$6 \cdot \frac{11}{6}x = 3 \cdot 6$$

$$11x = 18$$

$$\frac{11x}{11} = \frac{18}{11}$$

$$x = \frac{18}{11}$$

$$x^2 + x - 2 = 0 \xrightarrow{\text{solve}} \{x = 1\}, \{x = -2\}$$

$$a = 1$$

$$b = 1$$

$$c = -2$$

$$D = b^2 - 4ac$$

$$D = 1^2 - 4 \cdot 1 \cdot (-2) = 9$$

$$x = \frac{-1 + \sqrt{9}}{2 \cdot 1} = 1$$

$$x = \frac{-1 - \sqrt{9}}{2 \cdot 1} = -2$$

$$x^2 - 3x = 0 \xrightarrow{\text{solve}} \{x = 0\}, \{x = 3\}$$

$$a = 1$$

$$b = -3$$

$$c = 0$$

$$D = b^2 - 4ac$$

$$D = -3^2 - 4 \cdot 1 \cdot 0 = -9$$

$$x = \frac{-3 + \sqrt{9}}{2 \cdot 1} = 0$$

$$x = \frac{-3 - \sqrt{9}}{2 \cdot 1} = 3$$

$$x_1 = 0$$

$$x_2 = 3$$

$$x^2 - 25 = 0 \xrightarrow{\text{solve}} \{x = 5\}, \{x = -5\}$$

$$\begin{aligned}a &= 1 \\b &= 0 \\c &= -25\end{aligned}$$

$$D = b^2 - 4ac$$

$$D = 1^2 - 4 \cdot 0 \cdot -25 = 100$$

$$x = \frac{-0 + \sqrt{100}}{2 \cdot 1} = 5$$

$$x = \frac{-0 - \sqrt{100}}{2 \cdot 1} = -5$$

$$x_1 = 5$$

$$x_2 = -5$$

$$(x + 2) \cdot (x - 3) = 0 \xrightarrow{\text{solve}} \{x = -2\}, \{x = 3\}$$

$$x + 2 = 0$$

$$x + 2 - 2 = 0 - 2$$

$$x - 3 = 0$$

$$x - 3 + 3 = 0 + 3$$

$$x = 3$$

$$x_1 = -2$$

$$x_2 = 3$$

$$(x + 4)^2 = 0 \xrightarrow{\text{solve}} \{x = -4\}, \{x = -4\}$$

$$a^2 + b^2 + 2ab$$

$$x^2 + 4^2 + 2 \cdot x \cdot 4 = 0$$

$$x^2 + 8x + 16 = 0$$

$$x = \frac{-8 + \sqrt{8^2 - 4 \cdot 1 \cdot 16}}{2 \cdot 1} = -4$$

$$x = \frac{-8 - \sqrt{8^2 - 4 \cdot 1 \cdot 16}}{2 \cdot 1} = -4$$

$$x_{1,2} = -4$$