

Sievenciä

s. 155

740

a) $4 \cdot x = 4x$

b) $a \cdot 7 = 7a$

c) $5a + 8 \cdot b = 5a + 8b$

d) $1 \cdot y = y$

e) $-7 \cdot c = -7c$

f) $1x = x$

g) $5 \cdot a \cdot b = 5ab$

h) $c \cdot (-3) \cdot d = -3cd$

746

a) $7k + 4k = 11k$

b) $8r^3 - 6r^3 = 2r^3$

c) $-7d + 3d - d$
 $= -4d - d = -5d$

d) $-5t^2 + 2w^2 + 4t^2 - 6w^2$
 $= -t^2 - 4w^2$

747

$$a) 7 \cdot (-3a) = -21a$$

$$b) \frac{-12h^4}{4} = -3h^4$$

$$c) -2 \cdot 6s \cdot (-3s) \\ = -12s \cdot (-3s) = 36s^2$$

$$d) \frac{-35n^6}{-5} = 7n^6$$

$$x + x = 2x$$

$$x \cdot x = x^2$$

$$2a - 3a = -a$$

$$2a \cdot (-3a) = -6a^2$$

$$x + y \text{ valmis!}$$

$$x \cdot y = xy$$

742

Laste lausekkeen arvo,
kun $x = 2$

$$a) x + 6 \rightarrow 2 + 6 = 8$$

$$b) 7 - x \rightarrow 7 - 2 = 5$$

$$c) 10x \rightarrow 10 \cdot 2 = 20$$

$$d) -8x \rightarrow -8 \cdot 2 = -16$$

$$e) \frac{52}{x} \rightarrow \frac{52}{2} = 26$$

$$f) x^2 \rightarrow 2^2 = 4$$

745

$$x = 4$$

$$y = -2$$

$$z = -3$$

$$a) x^2 \rightarrow 4^2 = 4 \cdot 4 = 16$$

$$b) y^2 \rightarrow (-2)^2 = -2 \cdot (-2) = 4$$

$$c) xyz \rightarrow 4 \cdot (-2) \cdot (-3) \\ = -8 \cdot (-3) = 24$$

$$d) x^2 - y^3 \rightarrow 4^2 - (-2)^3$$

$$= 4 \cdot 4 - (-2) \cdot (-2) \cdot (-2)$$

$$= 16 - (-8)$$

$$= 16 + 8 = 24$$

$$e) \frac{2x}{y} \rightarrow \frac{2 \cdot 4}{-2} = \frac{8}{-2} = -4$$

$$f) 6z^2 \rightarrow 6 \cdot (-3)^2 = 6 \cdot (-3) \cdot (-3) = 6 \cdot 9 = 54$$

750

Ratkaise yhtälöt

$$a) x + 6 = 8 \quad || -6$$

$$x = 2$$

← yhtälön ratkaisu

$$b) x + 1 = 1 \quad || -1$$

$$x = 0$$

$$\begin{aligned} \text{c)} \quad x + 12 &= 10 & \parallel -12 \\ x &= -2 \end{aligned}$$

$$\begin{aligned} \text{d)} \quad x + 4 &= 2 & \parallel -4 \\ x &= -2 \end{aligned}$$

751

$$\begin{aligned} \text{a)} \quad x - 4 &= 2 & \parallel +4 \\ x &= 6 \end{aligned}$$

$$\begin{aligned} \text{b)} \quad x - 12 &= 10 & \parallel +12 \\ x &= 22 \end{aligned}$$

$$\begin{aligned} \text{c)} \quad x - 1 &= -3 & \parallel +1 \\ x &= -2 \end{aligned}$$

$$\begin{aligned} \text{d)} \quad x - 15 &= 8 & \parallel +15 \\ x &= 23 \end{aligned}$$

752

$$\begin{aligned} \text{a)} \quad 7x &= 21 & \parallel :7 \\ x &= 3 \end{aligned}$$

$$\begin{aligned} \text{c)} \quad 5x &= 100 & \parallel :5 \\ x &= 20 \end{aligned}$$

$$\begin{aligned} \text{b)} \quad 2x &= 0 & \parallel :2 \\ x &= 0 \end{aligned}$$

$$\begin{aligned} \text{d)} \quad 3x &= -15 & \parallel :3 \\ x &= -5 \end{aligned}$$

s.79

427

Pyöristä 1. desimaalin tarkkuuteen

$$\text{a)} \quad 16,27 \text{ m}^2 \approx 16,3 \text{ m}^2$$

$$b) 3,22 \text{ m} \approx 3,2 \text{ m}$$

$$c) 2,759 \text{ m} \approx 2,8 \text{ m}$$

$$3,24 \approx 3,2$$

$$3,25 \approx 3,3$$

Potenssi

429 a) $4^2 = 4 \cdot 4 = 16$

b) $2^3 = 2 \cdot 2 \cdot 2 = 8$

c) $5^1 = 5$

432 a) $100 \cdot 3^3 = 100 \cdot [3 \cdot 3 \cdot 3]$
 $= 100 \cdot [27] = 2700$

b) $(4+6)^4 = 10^4 = 10 \cdot 10 \cdot 10 \cdot 10$
 $= 10000$

c) $10^3 + 7^2 = 1000 + 49 = 1049$

Neliöjuuri

437 a) $\sqrt{9} = 3$ ($3^2 = 9$)

b) $\sqrt{49} = 7$ ($7^2 = 49$)

c) $\sqrt{100} = 10$ d) $\sqrt{64} = 8$

439

$$81 \text{ neliöjuuri: } \sqrt{81} = 9$$

$$6 \text{ neliö: } 6^2 = 36$$

$$16 \text{ neliöjuuri: } \sqrt{16} = 4$$

$$11 \text{ neliö: } 11^2 = 121$$

s. 142

664

kirjoitetaan yhtälö

$$\begin{array}{rcll} \text{a)} & 3x + 400 & = & x + 1000 & \parallel -x \\ & 2x + 400 & = & 1000 & \parallel -400 \\ & 2x & = & 600 & \parallel :2 \\ & x & = & 300 & \end{array}$$

$$\begin{array}{rcll} \text{b)} & 5x + 10 & = & 3x + 30 & \parallel -3x \\ & 2x + 10 & = & 30 & \parallel -10 \\ & 2x & = & 20 & \parallel :2 \\ & x & = & 10 & \end{array}$$