

1. Pyöristä seuraavat luvut yhden (1) desimaalin tarkkuuteen

$$3,141 \approx 3,1$$

$$12,5539 \approx 12,6$$

$$0,0941 \approx 0,1$$

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2. Laske

$$\begin{aligned} \text{a) } 2 \cdot 5^2 &= 2 \cdot 25 \\ &= 50 \end{aligned}$$

$$\begin{aligned} \text{b) } 3 + (-1)^3 &= 3 + (-1) \\ &= 3 - 1 = 2 \end{aligned}$$

$$\begin{aligned} \text{c) } \sqrt{9+16} &= \sqrt{25} \\ &= 5 \end{aligned}$$

$$\begin{aligned} \text{d) } \sqrt{9} - \sqrt{16} &= \\ 3 - 4 &= -1 \end{aligned}$$

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3. Sievennä lausekkeet

$$2 \cdot x - 1 \cdot y = 2x - y$$

$$a \cdot (-9) \cdot b \cdot 4 = -36ab$$

$$7x - 8x = -x$$

$$-2x + 3y + 3x - 5y = x - 2y$$

$$-6x^2 + 6x - 2x^2 = -8x^2 + 6x$$

$$2x \cdot 5x \cdot (-1) = -10x^2$$

$$\begin{array}{l} x+x=2x \\ x \cdot x=x^2 \end{array}$$

$$-6z + 9y + x - 12y =$$

$$x - 3y - 6z$$

$$\begin{aligned} x - 3 - x + 2 &= 0x - 1 \\ &= -1 \end{aligned}$$

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4. Laske lausekkeen $-8x + 5$ arvo, kun

a) $x = 1$

$$\begin{aligned} & -8 \cdot 1 + 5 \\ & = -8 + 5 = -3 \end{aligned}$$

b) $x = -2$

$$\begin{aligned} & -8 \cdot (-2) + 5 \\ & = 16 + 5 = 21 \end{aligned}$$

c) $x = 5,5$

$$\begin{aligned} & -8 \cdot 5,5 + 5 \\ & = -44 + 5 = -39 \end{aligned}$$

d) $x = \frac{1}{2}$

$$\begin{aligned} & -8 \cdot \frac{1}{2} + 5 \\ & = -4 + 5 = 1 \end{aligned}$$

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5. Laske lausekkeen arvo, kun $a = 5$ ja $b = -2$

a) $2a - b$

$$\begin{aligned} & 2 \cdot 5 - 2 \\ & = 10 - 2 = 8 \end{aligned}$$

b) $a^2 - b^2$

$$\begin{aligned} & 5^2 - (-2)^2 \\ & = 25 - 4 = 21 \end{aligned}$$

c) $\sqrt{6-a}$

$$\sqrt{6-5} = \sqrt{1} = 1$$

d) $-4ab$

$$\begin{aligned} & -4 \cdot 5 \cdot (-2) \\ & = 40 \end{aligned}$$

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8. Ratkaise yhtälöt

a) $x + 2 = 1 \quad || -2$

$$x + 2 - 2 = 1 - 2$$

$$x = -1$$

b) $3x = 24 \quad || :3$

$$x = 8$$

c) $x - 5 = -11 \quad || +5$

$$x - 5 + 5 = -11 + 5$$

$$x = -6$$

d) $\frac{x}{3} = 4 \quad || \cdot 3$

$$\frac{3x}{3} = 4 \cdot 3$$

$$x = 12$$

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