

Linearne jednačbe - ponavljanje NL10

1. Riješi jednačbe:

a) $6 \oplus x = -24$ b) $8x - 25 = 5x - 8$ c) $2x - 6 + 3x = x - 4$ d) $2(3x - 2) = 4(2x + 1)$

e) $\frac{2}{3}x - \frac{1}{2} = \frac{x}{6} - 1\frac{3}{4}$ f) $\frac{x+1}{8} - \frac{x-4}{12} = 1$

2. Riješi jednačbe:

a) $-5x = 19$ b) $2(3 - 4x) + 5(6x - 7) = 37$ c) $1.2(x + 8.4) = 0.3x$

d) $\frac{3x-1}{5} - \frac{5x+1}{12} = 1 + \frac{x-7}{4}$ e) $2x - 3(x - 2(x - 1) + (2x - 1)) = -6$

3. Ako se trokratnik nekog broja umanji za 3 dobije se broj za 7 veći od tog broja. Koji je to broj?

4. Površina pravokutnika je 108 cm^2 , a jedna njegova stranica duga je 9 cm. Koliki je opseg pravokutnika?

5. Opseg pravokutnika iznosi 17.8 cm, a jedna njegova stranica duga je $5\frac{1}{2}$ cm . Kolika je površina pravokutnika ?

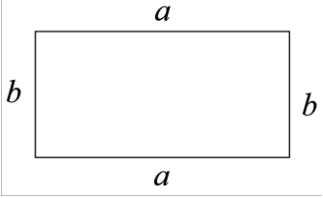
6. Otac je dvostruko stariji od sina. Koliko godina ima otac ,a koliko sin ako zajedno imaju 75 godina.

7. Polovina i trećina nekog broja zajedno iznose 20 . Koji je to broj?

?

Rješenja NL10 ponavljanje

<p>1. a) $6 \oplus x = -24 / : 6$</p> $x = -\frac{24}{6}$ $x = -4$	<p>b) $8x - 25 = 5x - 8$</p> $8x - 5x = 25 - 8$ $3x = 17 / : 3$ $x = \frac{17}{3} =$	<p>c) $2x - 6 + 3x = x - 4$</p> $5x - 6 = x - 4$ $5x - x = 6 - 4$ $4x = 2 / : 4$ $x = \frac{2}{4} = \frac{1}{2}$	<p>d) $2(3x - 2) = 4(2x + 1)$</p> $6x - 4 = 8x + 4$ $6x - 8x = 4 + 4$ $-2x = 8 / : (-2)$ $x = -\frac{8}{2} = -4$
<p>e) $\frac{2}{3}x - \frac{1}{2} = \frac{x}{6} - 1\frac{3}{4}$</p> $\frac{2}{3}x - \frac{1}{2} = \frac{1}{6}x - \frac{7}{4} / \oplus 12$ $8x - 6 = 2x - 21$ $8x - 2x = 6 - 21$ $6x = -15 / : 6$ $x = -\frac{15}{6} = -\frac{5}{2}$ $x = -2\frac{1}{2}$	<p>f) $\frac{x+1}{8} - \frac{x-4}{12} = 1 / \oplus 24$</p> $3(x+1) - 2(x-4) = 1 \oplus 24$ $3x + 3 - 2x + 8 = 24$ $x + 11 = 24$ $x = 24 - 11$ $x = 13$		
<p>2. a) $-5x = 19 / : (-5)$</p> $x = -\frac{19}{5}$ $x = -3\frac{4}{5}$	<p>b) $2(3 - 4x) + 5(6x - 7) = 37$</p> $6 - 8x + 30x - 35 = 37$ $22x = 37 + 35 - 6$ $22x = 66 / : 22$ $x = \frac{66}{22}$ $x = 3 \quad \text{Taj broj je tri}$		

<p>c) $1.2(x + 8.4) = 0.3x$</p> <p>$1.2x + 10.08 = 0.3x$</p> <p>$1.2x - 0.3x = -10.08$</p> <p>$0.9x = -10.08 \quad / : 0.9$</p> <p>$x = -11.2$</p>	<p>d) $\frac{3x - 1}{5} - \frac{5x + 1}{12} = 1 + \frac{x - 7}{4} \quad / \oplus 60$</p> <p>$12(3x - 1) - 5(5x + 1) = 60 + 15(x - 7)$</p> <p>$36x - 12 - 25x - 5 = 60 + 15x - 105$</p> <p>$11x - 17 = 15x - 45$</p> <p>$11x - 15x = 17 - 45$</p> <p>$-4x = -28 \quad / : (-4)$</p> <p>$x = 7$</p>		
<p>e) $2x - 3(x - 2(x - 1) + (2x - 1)) = -6$</p> <p>$2x - 3(x - \cancel{2x} + 2 + \cancel{2x} - 1) = -6$</p> <p>$2x - 3(x + 1) = -6$</p> <p>$2x - 3x - 3 = -6$</p> <p>$-x = 3 - 6$</p> <p>$-x = -3 \quad / : (-1)$</p> <p>$x = 3$</p>	<p>3. $3x - 3 = x + 7$</p> <p>$3x - x = 3 + 7$</p> <p>$2x = 10 \quad / : 2$</p> <p>$x = 5$</p>		
<p>4.</p>	 <p>$P = 108 \text{ cm}^2$</p> <p><u>$a = 9 \text{ cm}$</u></p> <p>$o = ?$</p>	<p>$P = a \oplus b$</p> <p>$108 = 9 \oplus b$</p> <p>$b = 108 : 9$</p> <p>$b = 12 \text{ cm}$</p>	<p>$o = 2(a + b)$</p> <p>$o = 2 \oplus (9 + 12)$</p> <p>$o = 2 \oplus 21$</p> <p>$o = 42 \text{ cm}$</p>
<p>5.</p>	<p>$a = 5\frac{1}{2} \text{ cm}$</p> <p><u>$o = 17.8 \text{ cm}$</u></p>		<p>$P = a \cdot b$</p>

	$P = ?$	$o = 2 \cdot (a + b)$ $17.8 = 2 \cdot (5.5 + b)$ $11 + 2b = 17.8$ $2b = 6.8$ $b = 3.4 \text{ cm}$		$P = 5.5 \cdot 3.4$ $P = 18.7 \text{ cm}^2$
--	---------	---	--	---

6. otac = $2x$ godina = 50

$$2x + x = 75$$

sin = x godina = 25

$$3x = 75 / : 3$$

Otac ima 50 , a sin 25 godina.

$$x = 25$$

7. x = neki broj

$$\frac{1}{2}x + \frac{1}{3}x = 20 / *6$$

Taj broj je 24

$$3x + 2x = 120$$

$$5x = 120 / : 5$$

$$x = 24$$