



### REŠEVANJE ENAČB Z ULOMKI

Enačbe z ulomki rešujemo tako, da najprej vse člene pomnožimo z najmanjšim skupnim večkratnikom vseh imenovalcev, nato pa enačbo ekvivalentno preoblikujemo.

♥ **NAUČI** se **PRAVILO** tako, da ga znaš **povedati in uporabiti** pri **REŠEVANJU** enačb z ulomki.

1. **ZAPIŠI in REŠI** v zvezek:

### UTRJEVANJE/ENAČBE Z ULOMKI (števec je dvočlenik)

ZN1 str. 80/29., 30.

#### 29. Reši enačbo in naredi preizkus.

$$a) \frac{x-2}{5} = 1$$

$$b) \frac{3x+2}{3} = \frac{x}{3}$$

$$c) \frac{5x-1}{6} = \frac{2x}{3}$$

$$č) \frac{x-3}{2} = \frac{x-2}{3}$$

$$d) 3x+1 = \frac{7x+5}{2}$$

$$e) x + \frac{7-x}{3} = \frac{21-x}{2}$$

$$f) \frac{3x+5}{4} - 1 = \frac{x-1}{2} + 1$$

$$g) \frac{x-6}{3} = \frac{4x-1}{2} + 1$$

#### 30. Reši enačbo in naredi preizkus.

$$a) y - \frac{y+5}{3} = 1 + \frac{y-5}{2}$$

$$b) y - \frac{y-1}{2} = \frac{y+5}{4}$$

$$c) 5 - \frac{2x-4}{4} = \frac{x}{2}$$

$$č) \frac{x+2}{4} - \frac{x-1}{8} = 1$$

$$d) \frac{x-2}{4} - \frac{x-9}{5} = \frac{x-1}{2}$$

$$e) \frac{3x-4}{5} - \frac{1}{3} = \frac{5x-4}{6}$$

2. PREVERI in DOPOLNI REŠITVE prejšnjega dne.

$$2a) \quad \frac{4-x}{6} = 2 / \cdot 6$$

$$\frac{(4-x) \cdot 6}{6} = 2 \cdot 6$$

$$\begin{aligned} 4 - x &= 12 \\ -x &= 12 - 4 \\ -x &= 8 / : (-1) \\ x &= -8 \end{aligned}$$

Preizkus:

$$\frac{4 - (-8)}{6} = 2$$

$$\frac{4 + 8}{6} = 2$$

$$\frac{12}{6} = 2$$

$$2 = 2$$

$$L = D$$

$$2b) \quad \frac{x-3}{2} = 2 \frac{1}{2} / \cdot 2$$

$$\frac{(x-3) \cdot 2}{2} = 2 \frac{1}{2} \cdot 2$$

$$x - 3 = \frac{5 \cdot 2}{2}$$

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

Preizkus:

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

$$\frac{5}{2} = 2 \frac{1}{2}$$

$$2 \frac{1}{2} = 2 \frac{1}{2}$$

$$L = D$$

$$2c) \quad \frac{x-5}{8} = 0,75 / \cdot 8$$

$$\frac{(x-5) \cdot 8}{8} = 0,75 \cdot 8$$

$$\begin{aligned} x - 5 &= 6 \\ x &= 6 + 5 \\ x &= 11 \end{aligned}$$

Preizkus:

$$\frac{11-5}{8} = 0,75$$

$$\frac{6}{8} = 0,75$$

$$\frac{3}{4} = 0,75$$

$$0,75 = 0,75$$

$$L = D$$

$$2\check{c}) \quad \frac{x+9}{3} = \frac{x}{3} + 4 / \cdot 3$$

$$\frac{(x+9) \cdot 3}{3} = \frac{x \cdot 3}{3} + 4 \cdot 3$$

$$\begin{aligned} x + 9 &= x + 12 \\ x - x &= 12 - 9 \\ 0x &= 3 \\ x &= / \end{aligned}$$

**NIMA REŠITVE!**

$$2d) \quad \frac{x-3}{3} = \frac{x+2}{4} / \cdot 12$$

$$\frac{(x-3) \cdot 12}{3} = \frac{(x+2) \cdot 12}{4}$$

$$\frac{(x-3) \cdot 4}{1} = \frac{(x+2) \cdot 3}{1}$$

$$(x-3) \cdot 4 = (x+2) \cdot 3$$

$$4x - 12 = 3x + 6$$

$$4x - 3x = 6 + 12$$

$$x = 18$$

Preizkus:

$$\frac{18-3}{3} = \frac{18+2}{4}$$

$$\frac{15}{3} = \frac{20}{4}$$

$$5 = 5$$

$$L = D$$

$$2e) \quad \frac{2x+1}{3} = \frac{x+2}{2} / \cdot 6$$

$$\frac{(2x+1) \cdot 6}{3} = \frac{(x+2) \cdot 6}{2}$$

$$\frac{(2x+1) \cdot 2}{1} = \frac{(x+2) \cdot 3}{1}$$

$$(2x+1) \cdot 2 = (x+2) \cdot 3$$

$$4x + 2 = 3x + 6$$

$$4x - 3x = 6 - 2$$

$$x = 4$$

Preizkus:

$$\frac{2 \cdot 4 + 1}{3} = \frac{4 + 2}{2}$$

$$\frac{8 + 1}{3} = \frac{6}{2}$$

$$\frac{9}{3} = 3$$

$$3 = 3$$

$$L = D$$

$$2f) \quad \frac{x+6}{3} = x-4 / \cdot 3$$

$$x+6 = 3x-12$$

$$x-3x = -12-6$$

$$-2x = -18 / : (-2)$$

$$x = 9$$

Preizkus:

$$\frac{9+6}{3} = 9-4$$

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

$$5 = 5$$

$$L = D$$

$$2g) \quad \frac{x+2}{4} - 1 = \frac{x}{5} / \cdot 20$$

$$\frac{(x+2) \cdot 20}{4} - 1 \cdot 20 = \frac{x \cdot 20}{5}$$

$$(x+2) \cdot 5 - 20 = x \cdot 4$$

$$5x + 10 - 20 = 4x$$

$$5x - 4x = 20 - 10$$

$$x = 10$$

Preizkus:

$$\frac{10+2}{4} - 1 = \frac{10}{5}$$

$$3 - 1 = 2$$

$$2 = 2$$

$$L = D$$

$$2h) \quad \frac{3-x}{4} + \frac{2x-5}{6} = 1 \quad / \cdot 12$$

$$(3-x) \cdot 3 + (2x-5) \cdot 2 = 12$$

$$9-3x+4x-10=12$$

$$x=12+1$$

$$x=13$$

$$2i) \quad \frac{x+7}{4} - \frac{x-4}{3} = 2 \quad / \cdot 12$$

$$(x+7) \cdot 3 - (x-4) \cdot 4 = 24$$

$$3x+21-4x-28=24$$

$$-x=24+7$$

$$x=-31$$

$$2j) \quad \frac{x+2}{5} - \frac{x-2}{6} + \frac{x+4}{2} = 17 \quad / \cdot 30$$

$$(x+2) \cdot 6 - (x-2) \cdot 5 + (x+4) \cdot 15 = 510$$

$$6x+12-5x+10+15x+60=510$$

$$16x=510-82$$

$$16x=428$$

$$x = \frac{428}{16} \quad (\text{krajšamo})$$

$$x = \frac{107}{4}$$

$$x = 26\frac{3}{4}$$

$$2k) \quad \frac{2x-1}{3} + \frac{x-2}{2} = \frac{4x}{5} + 6 \quad / \cdot 30$$

$$(2x-1) \cdot 10 + (x-2) \cdot 15 = 4x \cdot 6 + 180$$

$$20x-10+15x-30=24x+180$$

$$35x-24x=180+40$$

$$11x=220$$

$$x=20$$

$$2l) \quad \frac{3x-1}{4} = \frac{5x-11}{12} + 1\frac{2}{3} \quad / \cdot 24$$

$$6(3x-1) = 2(5x-11) + \frac{5 \cdot 24}{3}$$

$$18x - 6 = 10x - 22 + 40$$

$$8x = 24$$

$$x = 3$$



PREIZKUS:  $\frac{3 \cdot 3 - 1}{4} = \frac{5 \cdot 3 - 11}{12} + 1\frac{2}{3}$

$$\frac{8}{4} = \frac{4}{12} + 1\frac{2}{3}$$

$$2 = \frac{1}{3} + 1\frac{2}{3}$$

$$2 = 2$$

$$L = D$$

3. PRIPOROČILO: **delaj sproti**, pa boš **uspešen/uspešna**.

