

ČETVRTAK, 28.5. 2020. 6.D

Dragi moji učenici,

nadam se da ste riješili zadatke od utorka te si rješenja možete provjeriti o prilogu. Neki se zadaci mogu napraviti i drugačije, važno je da su postupci ispravni.

Čekam sva vaša pitanja te se slobodno javite u chat.

Novi sastanak na zoom-u je u ponedjeljak u 10 sati.

Danas ćemo objediniti razlomke i zagrade u jednadžbama.

Pri rješavanju linearnih jednadžbi primjenjujemo sljedeći postupak:

- oslobodimo se zagrada, pazeći pritom na pravila za rada sa zagradama
- oslobodimo se razlomka tako da obje strane jednadžbe pomnožimo najmanjim zajedničkim višekratnikom svih nazivnika u jednadžbi
- nepoznanice prebacujemo na lijevu, a ostale brojeve na desnu stranu jednadžbe (pazeći na promjenu predznaka prilikom mijenjanja strane jednadžbe)
- zbrajajući sređujemo lijevu i desnu stranu jednadžbe i svodimo je na oblik $ax=b$
- jednadžbu dijelimo brojem a uz nepoznanicu
- dobili smo rješenje jednadžbe
- provjeravamo rješenje

1. Pogledajte video lekciju <https://www.youtube.com/watch?v=yFebi03nRGA> te si prepisite prikazane primjere kao što biste prepisali s ploče.
2. Iz vašeg udžbenika riješite **zadatak 19. na stranici 135.**

Poslikajte mi ovu zadaću (rješenja zadatka 19.) te pošaljite na mail matematikasever@gmail.com do nedjelje navečer.

IND: poslat ću u chat

Pozdrav svima, vaša G.S.

DOMAĆA ZADACA

17. a) $0.4 - 1.2x = 4.3x + 5.9$
 $-1.2x - 4.3x = 5.9 - 0.4$
 $-5.5x = 5.5 \quad /: (-5.5)$
 $x = \frac{5.5}{-5.5} = -1$

c) $3.6x + 5.2 - x = 2 - 0.4x - 0.8$
 $3.6x - x + 0.4 = 2 - 0.8 - 5.2$
 $3x = 2 - 6$
 $3x = -4 \quad /: 3$
 $x = \frac{-4}{3} = -1\frac{1}{3}$

e) $2\frac{2}{5} - 0.2x - \frac{x}{4} = 1 - 1\frac{1}{2}x$
 $\frac{12}{5} - \frac{1}{5}x - \frac{x}{4} = 1 - \frac{3}{2}x \quad /: 20$
 $48 - 4x - 5x = 20 - 30x$
 $-4x - 5x + 30x = 20 - 48$
 $21x = -28 \quad /: 21$
 $x = \frac{-28}{21} = \frac{-4}{3} = -1\frac{1}{3}$

g) $0.25x - \frac{3}{4} + 1\frac{1}{2} - \frac{x}{3} = 0.5x - \frac{1}{6}$
 $\frac{1}{4}x - \frac{3}{4} + \frac{3}{2} - \frac{x}{3} = \frac{1}{2}x - \frac{1}{6} \quad /: 12$
 $3x - 9 + 18 - 4x = 6x - 2$
 $3x - 4x - 6x = -2 + 9 - 18$
 $3x - 10x = 9 - 20$
 $-7x = -11 \quad /: (-7)$
 $x = \frac{-11}{-7} = \frac{11}{7} = 1\frac{4}{7}$

b) $0.02x - 0.4 = 1.2 - 0.28x$
 $0.02x + 0.28x = 1.2 + 0.4$
 $0.3x = 1.6$
 $x = \frac{1.6}{0.3} = \frac{16}{3} = 5\frac{1}{3}$

d) $3x + \frac{1}{3} - 0.3x = 0.03 - \frac{x}{3}$
 $3x + \frac{1}{3} - \frac{3}{10}x = \frac{3}{100} - \frac{x}{3} \quad /: 300$
 $900x + 100 - 90x = 9 - 100x$
 $900x - 90x + 100x = 9 - 100$
 $1000x - 90x = -91$
 $910x = -91 \quad /: (910)$
 $x = \frac{-91}{910} = \frac{-1}{10} = -0.1$

f) $1\frac{1}{4} - 0.75x + \frac{3x}{4} = 0.25 - x$
 $\frac{5}{4} - \frac{3}{4}x + \frac{3}{4}x = \frac{1}{4} - x$
 $x = \frac{1}{4} - \frac{5}{4} = -\frac{4}{4}$
 $x = -1$
 (MOZE I DRUGACIJE...)

h) $\frac{x}{8} - 1.25 + \frac{5x}{2} - 1\frac{3}{4} = 0.5x - 2\frac{1}{2}$
 $\frac{x}{8} - \frac{5}{4} + \frac{5x}{2} - \frac{7}{4} = \frac{1}{2}x - \frac{5}{2} \quad /: 8$
 $x - 10 + 20x - 14 = 4x - 20$
 $x + 20x - 4x = -20 + 10 + 14$
 $21x - 4x = 24 - 20$
 $3x = 4 \quad /: 3$
 $x = \frac{4}{3} = 1\frac{1}{3}$

$$18] a) \frac{2x-3}{2} + \frac{x-4}{6} = \frac{x-5}{2} - \frac{4}{3}x \quad | \cdot 6$$

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

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

$$6x - 9 + x - 4 = 3x - 15 - 8x$$

$$6x + x - 3x + 8x = -15 + 9 + 4$$

$$15x - 3x = 13 - 15$$

$$12x = -2 \quad | : 12$$

$$\boxed{x = \frac{-2}{12} = -\frac{1}{6}}$$

$$b) \frac{5x+1}{4} - \frac{2-3x}{2} + \frac{2x-3}{8} = \frac{3}{2} \quad | \cdot 8$$

$$2 \cdot (5x+1) - 4 \cdot (2-3x) + 1 \cdot (2x-3) = 4 \cdot 3$$

$$\frac{10x+2}{2} - \frac{8}{2} + \frac{12x}{2} + \frac{2x-3}{2} = \frac{12}{2}$$

$$10x + 12x + 2x = 12 - 2 + 8 + 3$$

$$24x = 23 - 2$$

$$24x = 21 \quad | : 24$$

$$\boxed{x = \frac{21}{24} = \frac{7}{8}}$$

(možemo brže, a možemo dodati red kao u gornjem zadatku)

$$c) \frac{2x-8}{3} + \frac{5x-1}{6} = \frac{5}{9} - \frac{4-x}{2} \quad | \cdot 18$$

$$6(2x-8) + 3(5x-1) = 2 \cdot 5 - 9(4-x)$$

$$12x - 48 + 15x - 3 = 10 - 36 + 9x$$

$$12x + 15x - 9x = 10 - 36 + 48 + 3$$

$$27x - 9x = -36 + 61$$

$$18x = 25 \quad | : 18$$

$$\boxed{x = \frac{25}{18} = 1\frac{7}{18}}$$

$$d) \frac{3x-4}{3} + \frac{2x}{5} - \frac{4x+3}{6} = 1,5 - \frac{3x}{2} \quad | \cdot 30$$

$$10(3x-4) + 6 \cdot 2x - 5(4x+3) = 45 - 15 \cdot 3x$$

$$\underline{30x} - 40 + \underline{12x} - \underline{20x} - 15 = 45 - \underline{45x}$$

$$\underline{30x} + \underline{12x} - \underline{20x} + \underline{45x} = 45 + 40 + 15$$

$$87x - 20x = 100$$

$$67x = 100 \quad | : 67$$

$$\boxed{x = \frac{100}{67} = 1 \frac{33}{67}}$$

$$e) \frac{x+2}{2} + \frac{x+3}{3} - \frac{x+4}{4} = \frac{x+5}{5} - \frac{x+6}{6} \quad | \cdot 60$$

$$30(x+2) + 20(x+3) - 15(x+4) = 12(x+5) - 10(x+6)$$

$$\underline{30x} + \underline{60} + \underline{20x} + \underline{60} - \underline{15x} - \underline{60} = \underline{12x} + \underline{60} - \underline{10x} - \underline{60}$$

$$\underline{30x} + \underline{20x} - \underline{15x} - \underline{12x} + \underline{10x} = -60$$

$$60x - 27x = -60$$

$$33x = -60 \quad | : 33$$

$$\boxed{x = \frac{-60}{33} = \frac{-20}{11} = -1 \frac{9}{11}}$$

$$f) \frac{3}{4} - \frac{2x+5}{2} + 0,4x = \frac{3x+4}{5} - 2 \frac{1}{2} \quad \text{najprije sve pretvaramo u razlomke (ako treba)}$$

$$\frac{3}{4} - \frac{2x+5}{2} + \frac{2}{5}x = \frac{3x+4}{5} - \frac{5}{2} \quad | \cdot 20$$

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

$$15 - \underline{20x} - 50 + \underline{8x} = \underline{12x} + 16 - 50$$

$$-20x + 8x - 12x = 16 - 50 - 15 + 50$$

$$-32x + 8x = 66 - 65$$

$$-24x = 1 \quad | : (-24)$$

$$\boxed{x = \frac{-1}{24}}$$

$$g) \frac{2x+1}{5} - \frac{8-x}{15} + 2\frac{1}{5}x = \frac{3x-7}{3} + \frac{5x+5}{6}$$

$$\frac{2x+1}{5} - \frac{8-x}{15} + \frac{11}{5}x = \frac{3x-7}{3} + \frac{5x+5}{6} \quad | \cdot 30$$

$$6 \cdot (2x+1) - 2(8-x) + 6 \cdot 11x = 10(3x-7) + 5(5x+5)$$

$$\underline{12x+6} - 16 + \underline{2x} + \underline{66x} = \underline{30x-70} + \underline{25x+25}$$

$$\underline{12x} + \underline{2x} + \underline{66x} - 30x - 25x = \underline{-70} + \underline{25} - 6 + 16$$

$$80x - 55x = 41 - 76$$

$$25x = -35 \quad | : 25$$

$$\boxed{x = \frac{-35}{25} = \frac{-7}{5} = -1\frac{2}{5}}$$

$$h) \frac{2x-2}{2} - \frac{3x-3}{3} + \frac{4x-4}{4} = \frac{6x-6}{6} - \frac{8x-8}{8} \quad | \cdot 24 \quad (\text{možeš brže, pokazat će na zornu})$$

$$12(2x-2) - 8(3x-3) + 6(4x-4) = 4(6x-6) - 3(8x-8)$$

$$\underline{24x-24} - \underline{24x+24} + \underline{24x-24} = \underline{24x-24} - \underline{24x+24}$$

$$24x - 24 = 0$$

$$24x = 24 \quad | : 24$$

$$\boxed{x = \frac{24}{24} = 1}$$