

Dragi učenici,

Prvo vam stavljam rješenja zadatka sa prošlog predavanja.

ZADACI

2. a) $x - 1 = 3 \quad | +1$
 $x - 1 + 1 = 3 + 1$
 $x = 4$

PROVJERA:
 $4 - 1 = 3$
 $3 = 3 \quad \checkmark$

b) $x + 7 = 17 \quad | -7$
 $x + 7 - 7 = 17 - 7$
 $x = 10$

PROVJERA:
 $10 + 7 = 17$
 $17 = 17 \quad \checkmark$

"KOSA CRTA" ZNAČI DA
 NAZNAČENA RAČUNSKA
 POKUŠAJ IZA CRTE
 DJELUJE I NA LIJEVU
 I NA DESNU STRANU
 JEDNAKOSTI!

c) $3x = 12 \quad | :3$
 $3x : 3 = 12 : 3$
 $x = 4$

PROVJERA:
 $3 \cdot 4 = 12$
 $12 = 12 \quad \checkmark$

d) $5x = 4 \quad | :5$
 $5x : 5 = 4 : 5$
 $x = \frac{4}{5}$

PROVJERA:
 $5 \cdot \frac{4}{5} = 4$
 $4 = 4 \quad \checkmark$

3. a) $4x - 8 = 8 \quad | +8$
 $4x - 8 + 8 = 8 + 8$
 $4x = 16 \quad | :4$
 $4x : 4 = 16 : 4$
 $x = 4$

PROVJERA
 $4 \cdot 4 - 8 = 8$
 $16 - 8 = 8$
 $8 = 8 \quad \checkmark$

b) $7x + 12 = 0 \quad | -12$
 $7x + 12 - 12 = 0 - 12$
 $7x = -12 \quad | :7$
 $7x : 7 = -12 : 7$
 $x = -\frac{12}{7}$
 $x = -1\frac{5}{7}$

PROVJERA:
 $7 \cdot \left(-\frac{12}{7}\right) + 12 = 0$
 $-12 + 12 = 0$
 $0 = 0 \quad \checkmark$

$$\textcircled{3.} \text{ c) } 2x = 3x - 6 \quad | -3x$$

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

$$-x = -6 \quad | :(-1)$$

$$-x : (-1) = -6 : (-1)$$

$$\boxed{x = 6}$$

PROVJERA:

$$2 \cdot 6 = 3 \cdot 6 - 6$$

$$12 = 18 - 6$$

$$12 = 12 \checkmark$$

$$\text{d) } 6x = 7 + 8x \quad | -8x$$

$$6x - 8x = 7 + 8x - 8x$$

$$-2x = 7 \quad | :(-2)$$

$$-2x : (-2) = 7 : (-2)$$

$$\boxed{x = -\frac{7}{2}} = \boxed{-3\frac{1}{2}}$$

PROVJERA:

$$6 \cdot \left(-\frac{7}{2}\right) = 7 + 8 \cdot \left(-\frac{7}{2}\right)$$

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

$$-21 = 7 - 28$$

$$-21 = -21 \checkmark$$

$$\textcircled{11.} \text{ e) } 12 = 2x + 15 \quad | -15$$

$$12 - 15 = 2x + 15 - 15$$

$$-3 = 2x$$

$$2x = -3 \quad | :2$$

$$2x : 2 = -3 : 2$$

$$\boxed{x = -\frac{3}{2}} = \boxed{-1\frac{1}{2}}$$

PROVJERA:

$$12 = 2 \cdot \left(-\frac{3}{2}\right) + 15$$

$$12 = -3 + 15$$

$$12 = 12 \checkmark$$

$$\text{f) } 33 = -3x - 3 \quad | +3$$

$$33 + 3 = -3x - 3 + 3$$

$$36 = -3x \quad | :(-3)$$

$$36 : (-3) = -3x : (-3)$$

$$-12 = x$$

$$\boxed{x = -12}$$

PROVJERA:

$$33 = -3 \cdot (-12) - 3$$

$$33 = 36 - 3$$

$$33 = 33 \checkmark$$

$$\text{g) } 9 = 9x - 9 \quad | +9$$

$$9 + 9 = 9x - 9 + 9$$

$$18 = 9x \quad | :9$$

$$18 : 9 = 9x : 9$$

$$2 = x$$

$$\boxed{x = 2}$$

PROVJERA:

$$9 = 9 \cdot 2 - 9$$

$$9 = 18 - 9$$

$$9 = 9 \checkmark$$

SVEJEDNO JE KADA ĆETE
ZAMIJENITI STRANE JEDNAKOSTI!

$$\text{h) } 11 = 12 + x$$

$$12 + x = 11 \quad | -12$$

$$12 - 12 + x = 11 - 12$$

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

PROVJERA:

$$11 = 12 + (-1)$$

$$11 = 12 - 1$$

$$11 = 11 \checkmark$$

Sada kada ste provjerali sva rješenja, nastavljamo dalje s jednažbama!

Prvo pažljivo gledajte video na sljedećoj poveznici [od 9:50 do 17. min](https://youtu.be/FJfQ0SAZqsY?t=591) (Zadatak 3 i Zadatak 4)
<https://youtu.be/FJfQ0SAZqsY?t=591> te prepisite zadatke, postupke i rješenja oba zadatka.

Zatim tvorite bilježnicu i zapišite:

LINEARNA JEDNADŽBA S JEDNOM NEPOZNANICOM

Zadatak 3. Riješi jednadžbu.

$$\begin{aligned}\frac{1}{4}x - 3 &= 2 \quad | \cdot 4 \\ 4 \cdot \frac{1}{4}x - 3 \cdot 4 &= 2 \cdot 4 \\ \frac{4}{4}x - 12 &= 8 \\ 1x - 12 &= 8 \\ x - 12 &= 8 \quad | + 12 \\ x - 12 + 12 &= 8 + 12 \\ x + 0 &= 8 + 12 \\ x &= 8 + 12 \\ x &= 20\end{aligned}$$

$$\begin{aligned}\frac{1}{4}x - 3 &= 2 \quad | + 3 \\ \frac{1}{4}x - 3 + 3 &= 2 + 3 \\ \frac{1}{4}x + 0 &= 5 \\ \frac{1}{4}x &= 5 \\ 4 \cdot \frac{1}{4}x &= 5 \cdot 4 \\ \frac{4}{4}x &= 5 \cdot 4 \\ \frac{4}{4}x &= 20 \\ 1x &= 20 \\ x &= 20\end{aligned}$$

Provjera:

$$\begin{aligned}\frac{1}{4}(20) - 3 &= 2 \\ \frac{1}{4} \cdot 20 - 3 &= 2 \\ \frac{20}{4} - 3 &= 2 \\ 5 - 3 &= 2 \\ 2 &= 2\end{aligned}$$



Zadatak 4. Riješi jednadžbu.

$$\begin{aligned}\frac{2}{7}x - 4 &= -9 \quad | + 4 \\ \frac{2}{7}x - 4 + 4 &= -9 + 4 \\ \frac{2}{7}x + 0 &= -5 \\ \frac{2}{7}x &= -5 \quad | : \frac{2}{7} \\ \frac{7}{2} \cdot \frac{2}{7}x &= -5 \cdot \frac{7}{2} \\ 1x &= \frac{-35}{2} \\ x &= \frac{-35}{2}\end{aligned}$$

$$\begin{aligned}\frac{2}{7}x &= -5 \\ 7 \cdot \frac{2}{7}x &= -5 \cdot 7 \\ 2x &= -35 \\ \frac{2x}{2} &= \frac{-35}{2} \\ x &= \frac{-35}{2}\end{aligned}$$

$$\begin{aligned}\frac{2}{7}x - 4 &= -9 \\ 7 \cdot \frac{2}{7}x - 4 \cdot 7 &= -9 \cdot 7 \\ 2x - 28 &= -63 \\ 2x - 28 + 28 &= -63 + 28 \\ 2x + 0 &= -35 \\ 2x &= -35 \\ \frac{2x}{2} &= \frac{-35}{2} \\ x &= \frac{-35}{2}\end{aligned}$$

Provjera:

$$\begin{aligned}\frac{2}{7}x - 4 &= -9 \\ \frac{2}{7} \left(\frac{-35}{2} \right) - 4 &= -9 \\ -5 - 4 &= -9 \\ -9 &= -9\end{aligned}$$



Nakon toga pažljivo gledate video na sljedećoj poveznici od vremena **22:53 do 28. min (Zadatak 6)**

<https://youtu.be/FJfQ0SAZqsY?t=1374>

U svoje bilježnice prepisujete ova rješenja i provjeru rješenja iz videa:

Zadatak 6. Riješi jednadžbu.

$$\begin{aligned}\frac{1}{3}x - \frac{5}{6} &= \frac{1}{2} \quad / \cdot 6 \\ 6 \cdot \frac{1}{3}x - \frac{5 \cdot 6}{6} &= \frac{1 \cdot 6}{2} \\ 2x - \frac{5 \cdot 6}{6} &= \frac{1 \cdot 6}{2} \\ 2x - 5 &= 3 \\ 2x - 5 + 5 &= 3 + 5 \\ 2x + 0 &= 8 \\ 2x &= 8 \\ \frac{2x}{2} &= \frac{8}{2} \\ x &= \frac{8}{2} \\ x &= 4\end{aligned}$$

$$\begin{aligned}6 \cdot \frac{1}{3}x - \frac{5 \cdot 6}{6} &= \frac{1 \cdot 6}{2} \\ \frac{6}{3}x - \frac{30}{6} &= \frac{6}{2} \\ 2x - 5 &= 3\end{aligned}$$

Provjera:

$$\begin{aligned}\frac{1}{3}(4) - \frac{5}{6} &= \frac{1}{2} \\ \frac{1}{3} \cdot 4 - \frac{5}{6} &= \frac{1}{2} \\ \frac{4}{3} - \frac{5}{6} &= \frac{1}{2} \\ \frac{4 \cdot 2}{6} - \frac{5}{6} &= \frac{1}{2} \\ \frac{8}{6} - \frac{5}{6} &= \frac{1}{2} \\ \frac{3}{6} &= \frac{1}{2} \\ \frac{1}{2} &= \frac{1}{2}\end{aligned}$$



Projekt Podrška provedbi
Cjelovite kurikularne
reformе (CKR)



Nakon toga pažljivo gledate video na sljedećoj poveznici od vremena **22:30 do 27:40 min (Zadatak 5)**

<https://youtu.be/FF2ySgEAocU?t=1351>

U svoje bilježnice prepisujete ova rješenja i provjeru rješenja iz videa:

Zadatak 5. Riješi jednadžbu.

$$\begin{aligned}\frac{1}{2}x + 9 &= \frac{3}{4}x - 16 \\ \left(\frac{1}{2}x + 9\right)4 &= \left(\frac{3}{4}x - 16\right)4 \\ 4 \cdot \frac{1}{2}x + 36 &= 4 \cdot \frac{3}{4}x - 64 \\ 2x + 36 &= 3x - 64 \\ 2x - 2x + 36 &= 3x - 64 - 2x \\ 0 + 36 &= 3x - 64 - 2x \\ 36 &= 3x - 64 - 2x \\ 36 &= 1x - 64 \\ 36 + 64 &= 1x - 64 + 64 \\ 100 &= 1x + 0 \\ 100 &= 1x \\ x &= 100\end{aligned}$$

$$\begin{aligned}2x + 36 &= 3x - 64 \\ 2x + 36 - 36 &= 3x - 64 - 36 \\ 2x + 0 &= 3x - 64 - 36 \\ 2x &= 3x - 64 - 36 \\ 2x &= 3x - 100 \\ 2x - 3x &= 3x - 3x - 100 \\ 2x - 3x &= 0 - 100 \\ -x &= -100 \\ -1x &= -100\end{aligned}$$

$$\begin{aligned}-1x &= -100 \\ x &= 100\end{aligned}$$

Provjera:

$$\begin{aligned}\frac{1}{2}x + 9 &= \frac{3}{4}x - 16 \\ \frac{1}{2} \cdot 100 + 9 &= \frac{3}{4} \cdot 100 - 16 \\ 1 \cdot 50 + 9 &= 3 \cdot 25 - 16 \\ 50 + 9 &= 3 \cdot 25 - 16 \\ 59 &= 3 \cdot 25 - 16 \\ 59 &= 75 - 16 \\ 59 &= 59\end{aligned}$$



Projekt Podrška provedbi
Cjelovite kurikularne
reformе (CKR)



I zadnje....

Zapišite i ovo važno pravilo!

Važno!

Ako se u jednadžbi pojavljuju **razlomci**, sve članove jednadžbe pomnožimo s najmanjim zajedničkim nazivnikom.

Tako smo se „riješili“ razlomaka u jednadžbi. Nakon toga rješavamo jednadžbu s cijelim brojevima.



Ministarstvo
znanosti i
obrazovanja



Projekt Podrška provedbi
Cjelovite kurikularne
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Na kraju riješite **16. a), b), c) i d)** zadatak koji se nalazi u vašem udžbeniku na 134. str.

To bi bilo to za danas!

Trebate sve zadatke riješiti do utorka do 9h!

Slobodno se javite ako nešto nije jasno!

Vaša,

Maja B.