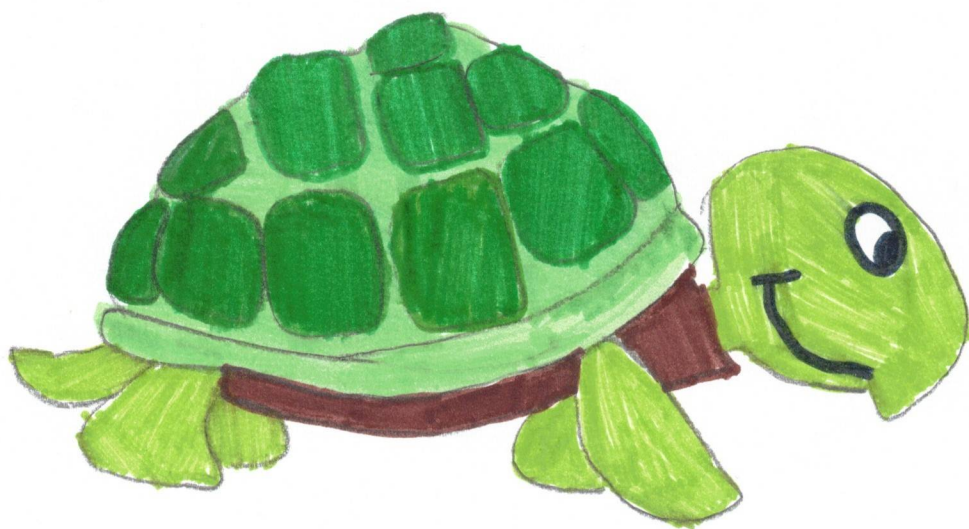




Pablo

MATEMATIČKA SLIKOVNICA



Kornelija

Pingvin i kornjača su odlučili

Zajedno trenirati kako bi pobjedili na maratonu. Pablo prijede stazu za 20 min, a Kornelija za 18 min. Nakon koliko vremena će se Pablo i Kornelija opet naći na startu ako u isto vrijeme krenu sa starta? Koliko puta za to vrijeme stazu prijede Pablo, a koliko puta Kornelija?

RJEŠENJE:

$$V(20, 18) = 2 \cdot 2 \cdot 5 \cdot 3 \cdot 3 = 180$$

$$180 : 60 = 3$$

Pablo:

$$180 : 20 = 9$$

Kornelija:

$$180 : 18 = 10$$

Pingvin Pablo i kornjača Kornelija će se opet naći na startu nakon 180 min tj. nakon 3 h.

Pablo prijede stazu 9 puta u 180 min, a Kornelija 10 puta u 180 min.

START

Pablo ima $12\frac{3}{4}$ godina, a Kornelija je za $2\frac{1}{2}$ godina starija od Pabla. Koliko godina ima Kornelija?

RJEŠENJE:



$$12\frac{3}{4} + 2\frac{1}{2} = \frac{51}{4} + \frac{5}{2} = \frac{51}{4} + \frac{10}{4} = \frac{61}{4} = 15\frac{1}{4}$$

Kornelija ima $15\frac{1}{4}$ godina.



Kornelija je skupila $\frac{2}{7}$ jagoda, a Pablo je za $1\frac{1}{2}$ više. Koliko su jagoda skupili zajedno?

Kornelija:

$$\frac{2}{7}$$

Pablo:

$$\frac{2}{7} + 1\frac{1}{2} = \frac{2}{7} + \frac{3}{2} = \frac{4}{14} + \frac{21}{14} = \frac{25}{14} = 1\frac{11}{14}$$

Zajedno:

$$\frac{2}{7} + \frac{25}{14} = \frac{4}{14} + \frac{25}{14} = \frac{29}{14} = 2\frac{1}{14}$$



Pablo je skupio $1\frac{11}{14}$ jagoda, a zajedno su skupili $2\frac{1}{14}$ jagoda.

Zadatak: spoji oblake tako da riješenje spojiš s zadatkom.

$$\frac{1}{4} \cdot \frac{6}{3}$$

$$\frac{7}{10}$$

$$\frac{7}{8} \cdot \frac{5}{4}$$

$$\frac{8}{5} + \frac{4}{3}$$

$$\frac{5}{8} - \frac{3}{8}$$

$$1\frac{2}{3} \cdot 2\frac{4}{5}$$

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

$$\frac{1}{4}$$

$$2\frac{14}{15}$$

$$4\frac{2}{3}$$

RJEŠENJE:

$$\frac{1}{4} \cdot \frac{6}{3} = \frac{1}{2} \cdot \frac{3}{3} = \frac{3}{6} = \frac{1}{2}$$

$$\frac{7}{15} \cdot \frac{8}{10}$$

$$\frac{7}{8} \cdot \frac{5}{4} = \frac{7}{8} \cdot \frac{4}{5} = \frac{7}{2} \cdot \frac{1}{5} = \frac{7}{10}$$



$$\frac{8}{5} + \frac{4}{3} = \frac{24}{15} + \frac{20}{15} = \frac{44}{15} = 2\frac{14}{15}$$

$$\frac{5}{8} - \frac{3}{8} = \frac{2}{8} = \frac{1}{4}$$

$$1\frac{2}{3} \cdot 2\frac{4}{5} = \frac{15}{3} \cdot \frac{14}{5} = \frac{1}{3} \cdot \frac{14}{1} = \frac{14}{3} = 4\frac{2}{3}$$

Kornelija i Pablo redovito idu u dućan. Kornelija ide svaki šesti dan, a Pablo svaki deveti dan. Ako su 31. siječnja bili zajedno u dućanu, kada će opet ići zajedno u dućan? Koliko će puta zajedno ići u dućan u Veljači?

RJEŠENJE:

VELJAČA

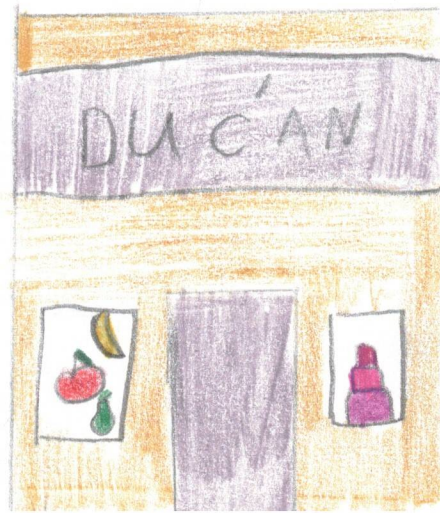
PON	UTO	SRI	ČET	PET	SUB	NEĐ
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Zaokruženo s su dani kad dolazi Kornelija, a kad dolazi Pablo. su zaokruženi dani kad dolaze zajedno.

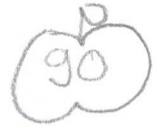
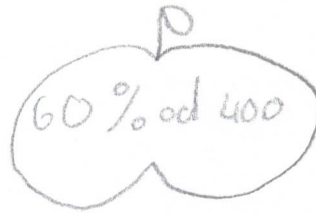
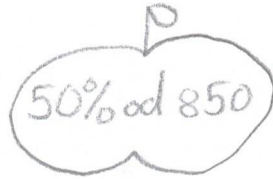
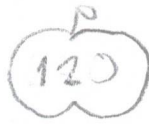
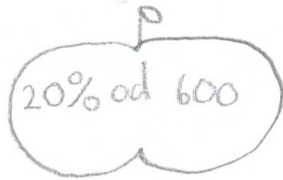
$$\sqrt{(6,9)} = 3 \cdot 3 \cdot 2 = 18$$

odgovor:

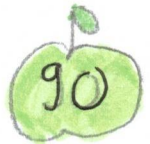
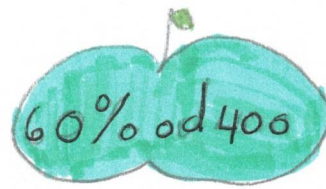
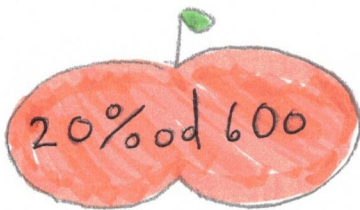
Zajedno će ići u dućan 18. veljače.



Pomozi Korneliji jabuke iste vrijednosti
obojati istom bojom.



RJEŠENJE:



$$20\% \text{ od } 600 = \frac{20}{100} \cdot \frac{600}{1} = 20 \cdot 6 = 120$$

$$50\% \text{ od } 850 = \frac{50}{100} \cdot \frac{850}{1} = 5 \cdot 85 = 425$$

$$60\% \text{ od } 400 = \frac{60}{100} \cdot \frac{400}{1} = 60 \cdot 4 = 240$$

$$30\% \text{ od } 300 = \frac{30}{100} \cdot \frac{300}{1} = 30 \cdot 3 = 90$$



Kornelija je kupila tri različita kolača:

- pitu od jabuka dužine 24 cm
- roladu od jagode dužine 28 cm
- pitu od sira dužine 36 cm

Pablo obožava ove kolače pa je zamolio Korneliju da nareže kolače na jednake djelove jer mu dolaze prijatelji.

Kolika će biti debljina svakog odrezanog komada? Koliko će Pablo pozvat prijatelja ako svaki pojede dva komada?

RIJEŠENJE:

$$D(24, 28, 36) = 2 \cdot 2 = 4$$

$$\begin{array}{l|l} 24, 28, 36 & 2 \\ 12, 14, 18 & 2 \\ 6, 7, 9 & \end{array}$$

KOMADI:

$$\text{PITA OD JABUKE} = 24 : 4 = 6$$

$$\text{ROLADA OD JAGODE} = 28 : 4 = 7$$

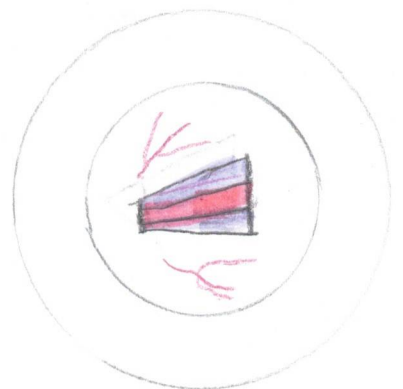
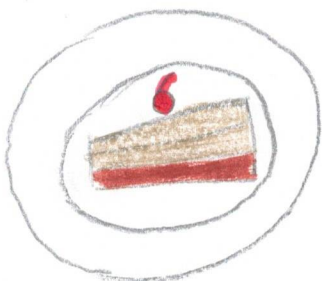
$$\text{PITA OD SIRA} = 36 : 4 = 9$$

PRIJATELJI

$$(6 + 7 + 9) : 2 = 22 : 2 = 11$$

ODGOVOR:

Debljina svakog odrezanog komada je 4 cm. Pablo će pozvat 11 prijatelja.



Pablo trenira nogomet 4 puta na tjedan po $2\frac{1}{4}$ sati, a Pablov brat Ante 6 puta na tjedan po $1\frac{1}{2}$ sata. Tko tjedno više trenira?

RJEŠENJE:

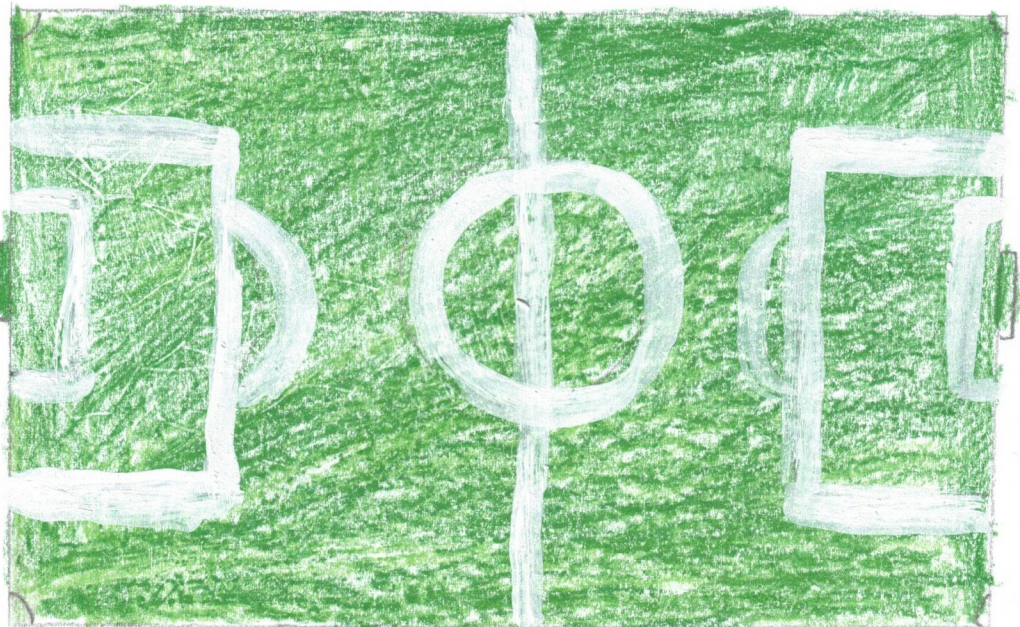
Pablo:

$$2\frac{1}{4} \cdot 4 = \frac{9}{4} \cdot \frac{4}{1} = \frac{9}{1} \cdot \frac{1}{1} = \frac{9}{1} = 9$$

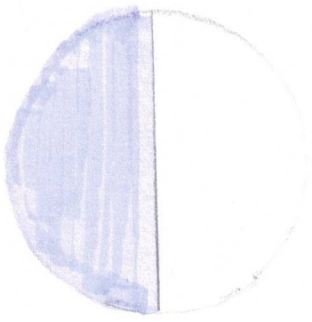
Ante:

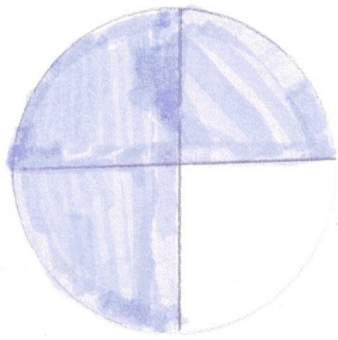
$$1\frac{1}{2} \cdot 6 = \frac{3}{2} \cdot \frac{6}{1} = \frac{3}{1} \cdot \frac{4}{1} = \frac{12}{1} = 12$$

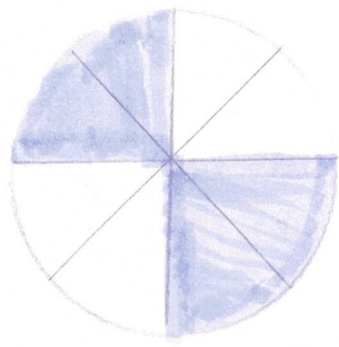
Ante trenira nogomet više puta tjedno od Pabla



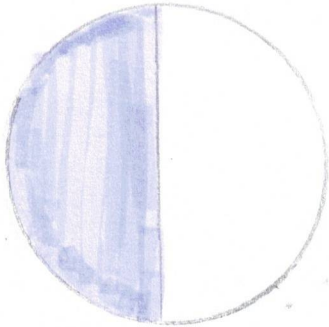
ZADATK:



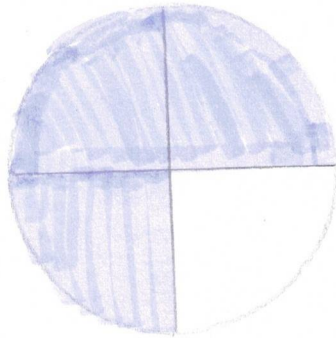




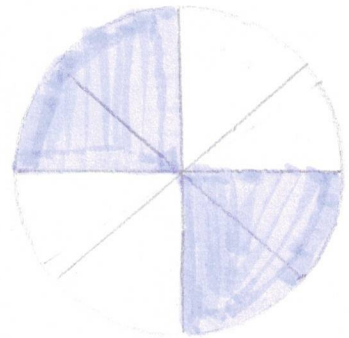
RJEŠENJE:



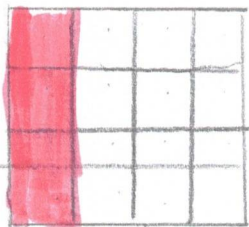
$$\frac{1}{2}$$



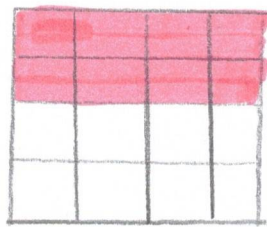
$$\frac{3}{4}$$



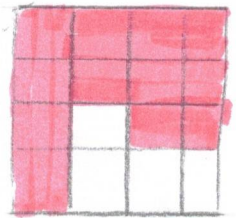
$$\frac{4}{8} \text{ ili } \frac{2}{4} \text{ ili } \frac{1}{2}$$



+



=



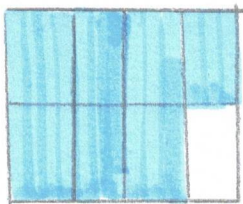
$$\frac{4}{16}$$

+

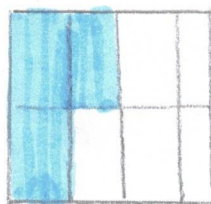
$$\frac{8}{16}$$

=

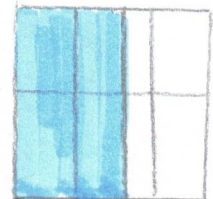
$$\frac{12}{16}$$



-



=



$$\frac{7}{8}$$

-

$$\frac{3}{8}$$

=

$$\frac{4}{8}$$

Kornelija je skupila 700 kn. Htjela je kupiti kaput koji košta 1000 kn. Može li Kornelija kupiti kaput ako je od 15.4. sve do 20.4. 25% popusta?

RJEŠENJE:

$$25\% \text{ od } 1000 = 25\% \cdot 1000 = \frac{25}{100} \cdot 1000 = \frac{250}{1} = 250$$

$$\begin{array}{r} 1000 \\ - 250 \\ \hline 750 \end{array}$$

Kornelija nažalost ne može kupiti kaput jer joj nedostaje 50 kn.



Pablo je Korneliji dao 76 kn jer joj je bio dužan. Danas je 19.4. i Kornelija odlazi do dućana. U dućanu više nije bilo tog kaputa kojeg je htjela Kornelija, ali zato nalazi prekrasne tenisice koje koštaju 900 kn i na popustu su 20%. Može li Kornelija ovog puta kupiti tenisice?

$$20\% \cdot 900 = \frac{20}{100} \cdot 900 = \frac{180}{1} = 180$$

$$\begin{array}{r} 900 \\ - 180 \\ \hline 720 \end{array} \quad \begin{array}{r} 776 \\ - 720 \\ \hline 56 \end{array}$$



Kornelija može kupiti tenisice i ostat će joj 56 kn.

Pablo je ispekao $\frac{30}{4}$ matina, a Kornelija je pojela $2\frac{3}{4}$ matina. Koliko je Pablu ostalo matina?

RJEŠENJE:

$$\frac{30}{4} - 2\frac{3}{4} = \frac{30}{4} - \frac{11}{4} = \frac{19}{4} = 4\frac{3}{4}$$



Pablu je ostalo $\frac{19}{4}$ matina, to jest $4\frac{3}{4}$ matina.

Pomogni Korneliji odrediti površinu kvadrata ako je duljina stranice $a = \frac{2}{3}$ dm.

RJEŠENJE:

$$a = \frac{2}{3} \text{ dm}$$

$$P = ?$$

$$P = a^2$$

$$P = \left(\frac{2}{3}\right)^2$$

$$P = \frac{2}{3} \cdot \frac{2}{3}$$

$$P = \frac{4}{9} \text{ dm}^2$$

PAZI!
Kvadratirati znači pomnožiti broj sa samim sobom.

