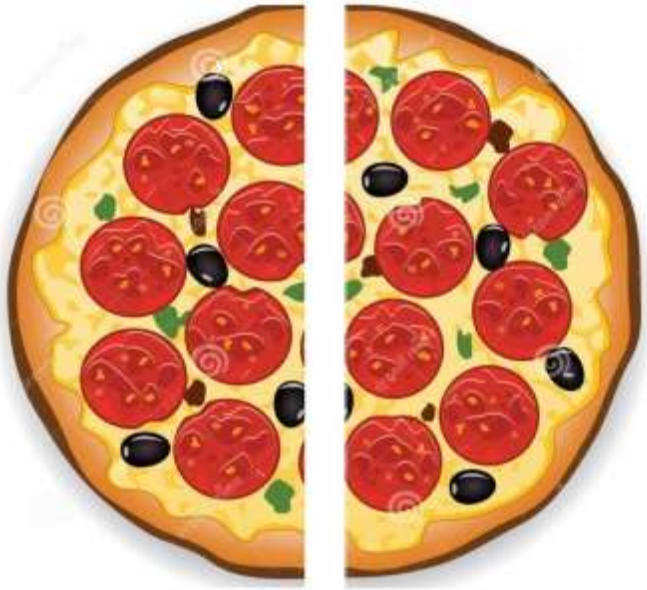
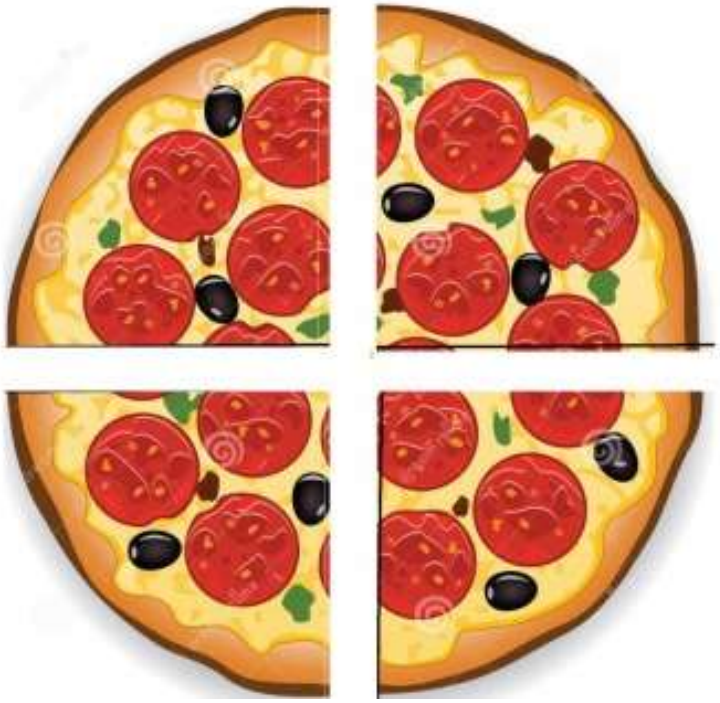
Razlomci

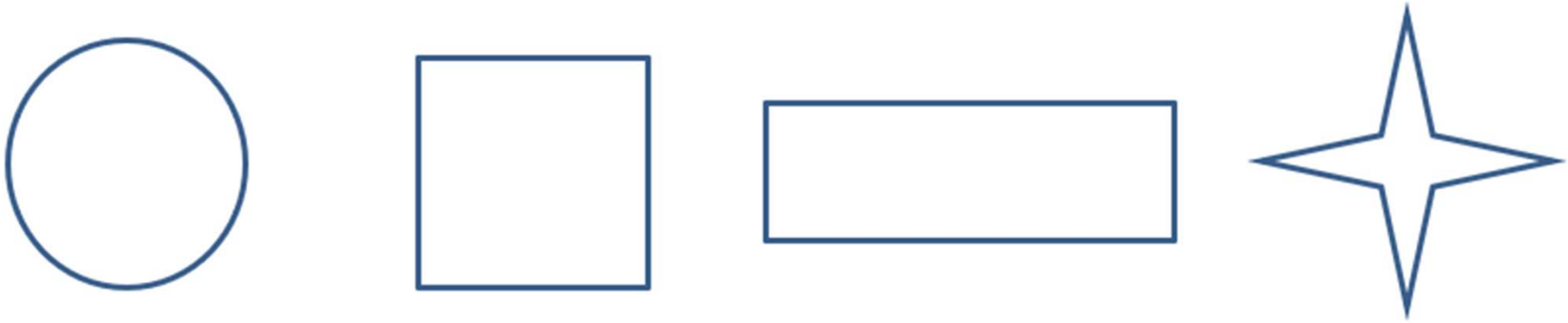




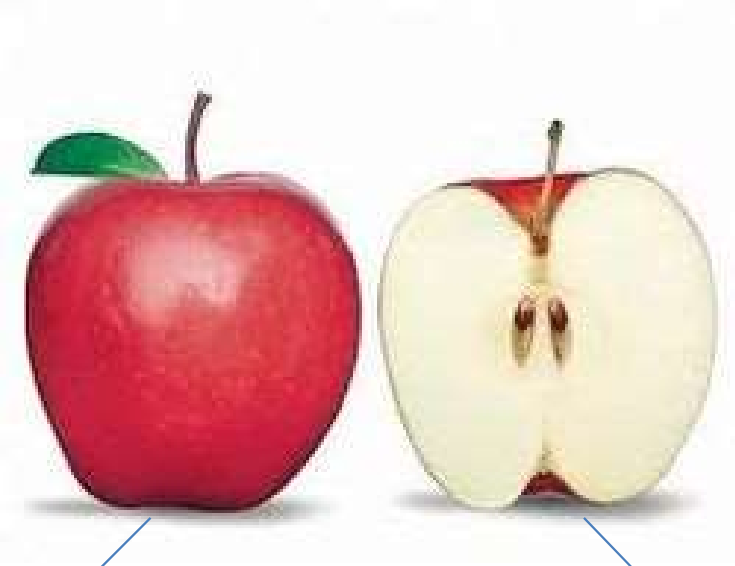
Radni listić (polovine i četvrtine)

Razdijeli lik na pola. Oboji JEDNU POLOVINU lika.

Razdijeli lik na 4 jednaka dijela. Oboji JEDNU ČETVRTINU lika.



- Razlomci se pojavljuju kada imamo dijelove neke cjeline.



Cijela jabuka čini

JEDNU CJELINU

1

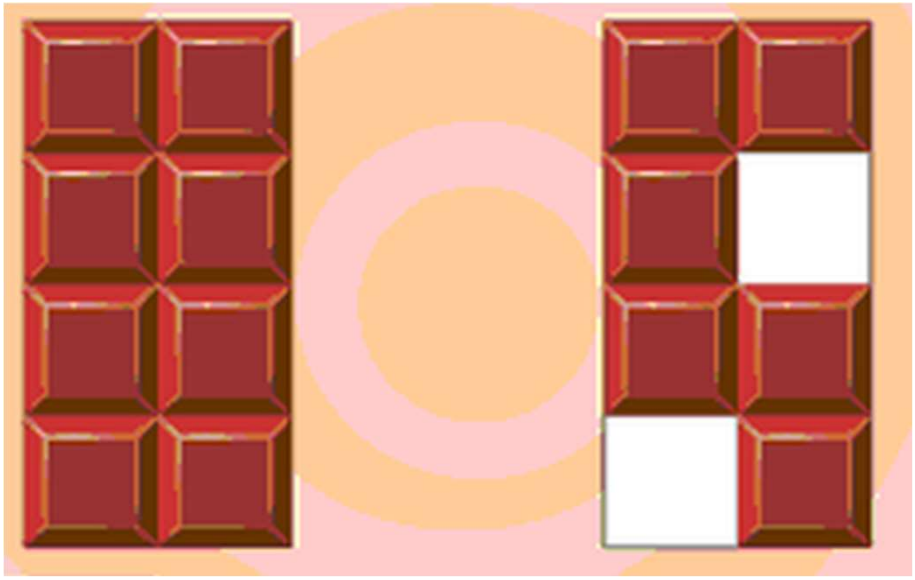
Pola jabuke čini

JEDNU POLOVINU

$\frac{1}{2}$

Torta je podijeljena na 4 jednaka dijela.
Svaki dio čini JEDNU ČETVRTINU.

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



Cijela čokolada ima 8 kockica.
Svaka kockica čini JEDNU OSMINU.

$$\frac{1}{8}$$

Ovoj čokoladi nedostaju dvije kockice.
Nedostaju DVIJE OSMINE.

$$\frac{2}{8}$$

Koliki dio čokolade jest na slici?

$$\frac{6}{8}$$

ŠEST OSMINA

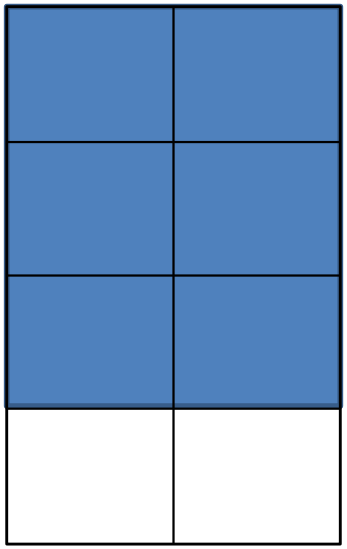
Zapišimo…

- Brojeve oblika

$$\frac{1}{2},\frac{1}{3},\frac{2}{3},\frac{1}{4},\frac{2}{4},\frac{3}{4},\frac{1}{5},\frac{1}{6},\ldots$$

nazivamo RAZLOMCIMA .

Razlomkom se izražava dio neke cjeline.



$$\frac{6}{8}$$

BROJNIK — Određuje BROJ dijelova (ŠEST)

RAZLOMAČKA CRTA

NAZIVNIK — Određuje NAZIV dijelova (OSMINE)
jer je podijeljeno na 8 dijelova

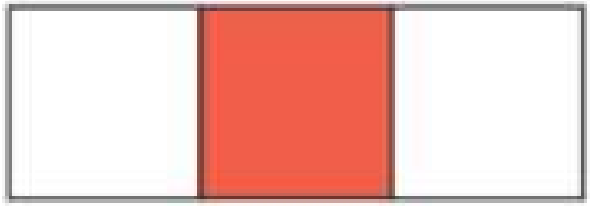
šest osmina

ili

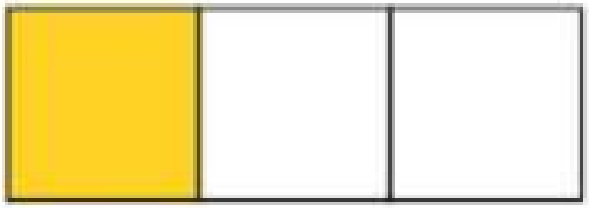
šest kroz osam

Koji dio lika je objan?

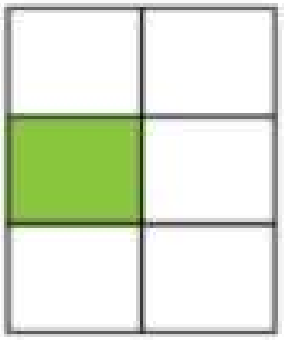
a)



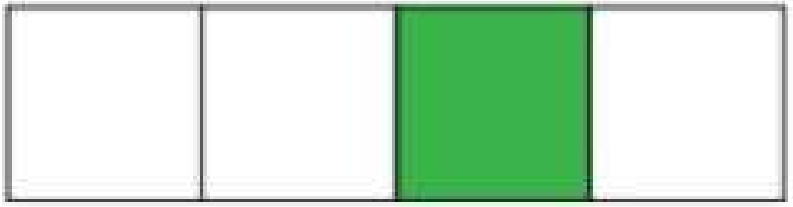
b)



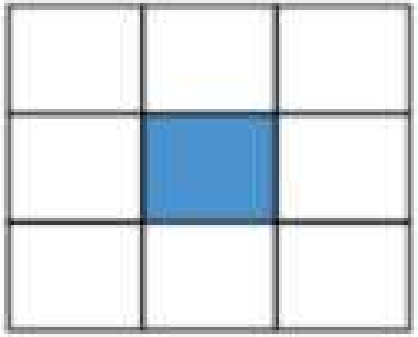
c)



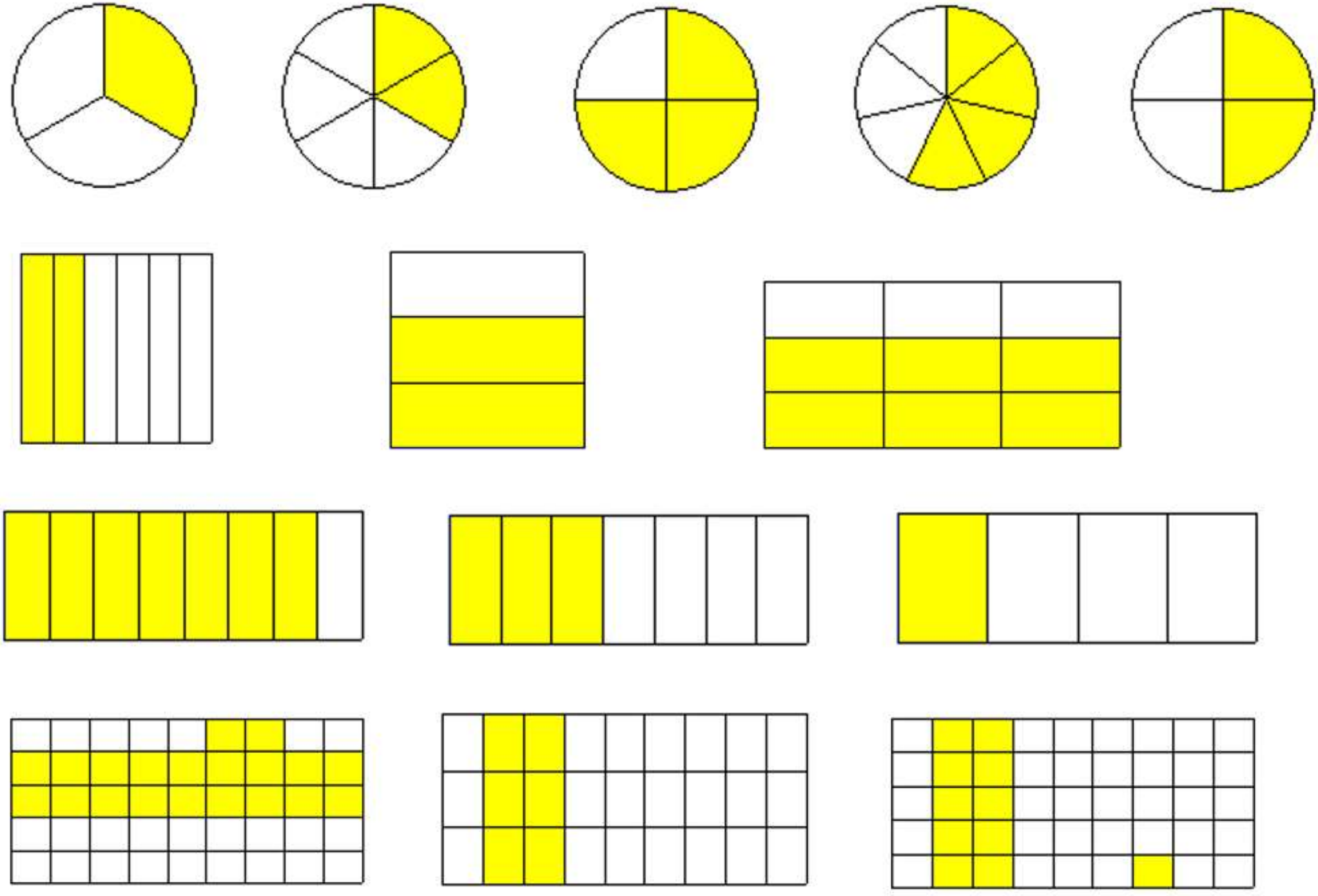
d)



e)



Radni listić



Zapiši rječima:

$\frac{1}{3}$	jedna trećina
$\frac{2}{5}$	dvije petine
$\frac{1}{2}$	jedna POLOVINA
$\frac{8}{15}$	osam petnaestina
$\frac{32}{50}$	trideset dvije pedesetine

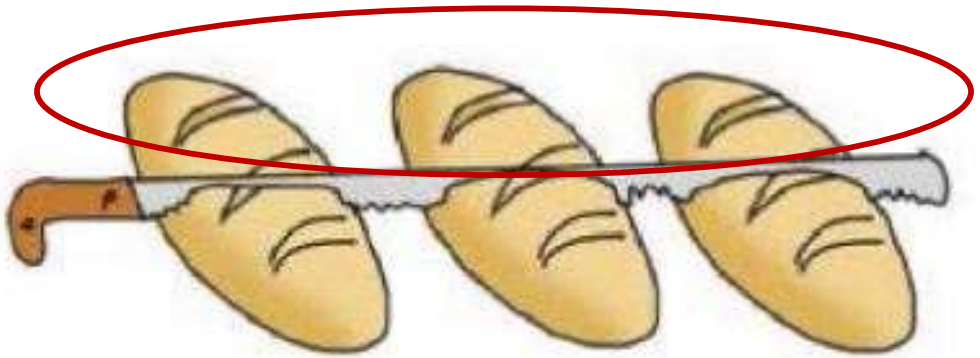
Zapiši razlomkom:

četiri sedmine	$\frac{4}{7}$
dvadeset jedna četrdesettrećina	$\frac{21}{43}$
osam dvanaestina	$\frac{8}{12}$
tri desetine	$\frac{3}{10}$
jedna stotina	$\frac{1}{100}$

Koji je brojnik,a koji je nazivnik ovih razlomaka?

Zadatci 4. i 5. (str. 10)

Ako 3 kruha dijelimo na 2 jednaka dijela, dobit ćemo dva dijela po $\frac{3}{2}$.

$3 : 2$  $= \frac{3}{2}$

- Općenito vrijedi:

$$1 : 8 = \frac{1}{8}$$

$$2 : 3 = \frac{2}{3}$$

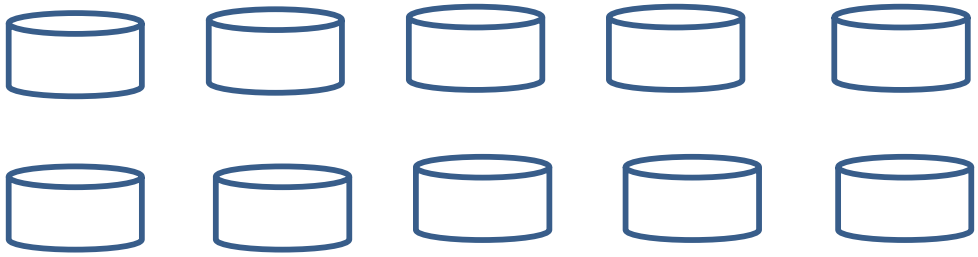
$$4 : 7 = \frac{4}{7}$$

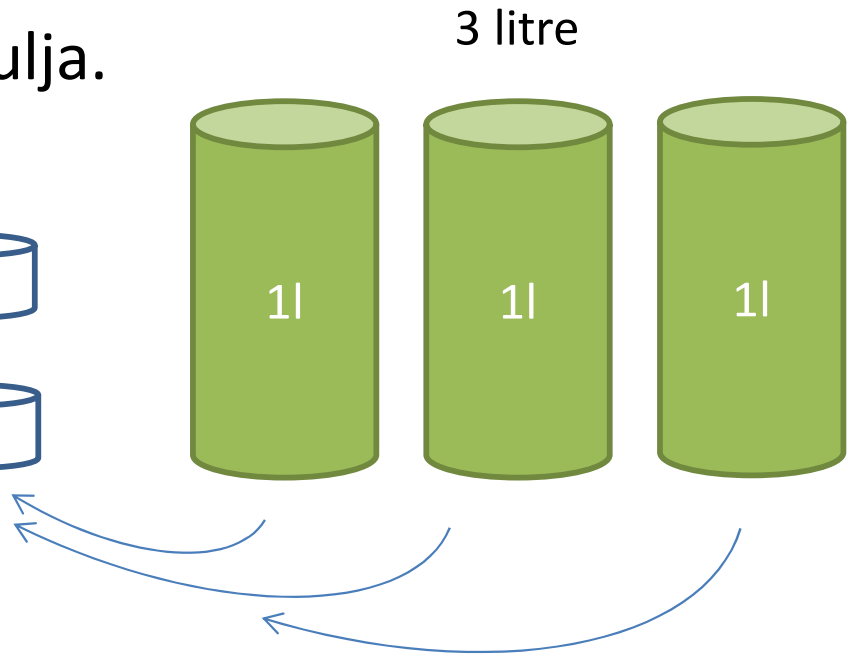
Rezultat dijeljenja dvaju prirodnih brojeva jest razlomak.

Razlomačka crta = dijeljenje

Primjer:

U 10 zdjelica treba rastočiti 3 litre ulja.
Koliko ulja će biti u svakoj zdjelici?





3 litre dijelimo na 10 zdjelica

Kada rastočimo 1 litru u svakoj zdjelici će biti jedna desetina litre.
Kada rastočimo sve 3 litre u svakoj će biti po 3 desetine litre.

$$3 : 10 = \frac{3}{10}$$

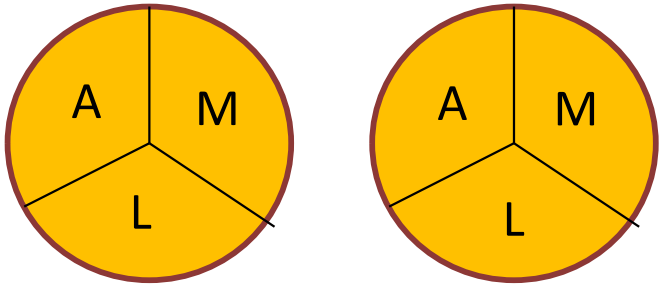
U svakoj zdjelici će biti tri desetine litre.

Zadatak:

Ana, Maja i Lara su naručile 2 pizze i ravnomjerno ih podijelile.
Koliki dio je pojela svaka?

2 pizze treba podijeliti na 3 prijateljice.

$$2 : 3 = \frac{2}{3}$$



Svaka će dobiti $\frac{2}{3}$ pizze.

Jesmo li razumijeli?

https://hr.izzi.digital/DOS/204/245.html#block-14106

- Vrijedi:

Svaki prirodni broj može se zapisati u obliku razlomka koji ima nazivnik 1.

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

$$5 = \frac{5}{1}$$ jer 5:1= 5

$$14 = \frac{14}{1}$$ jer 14:1= 14

Zadatak:

Prirodne brojeve 3, 8, 21 i 54 zapiši u obliku razlomka.

$$3 = \frac{3}{1} = \frac{6}{2} = \frac{9}{3} = \frac{12}{4} = \frac{15}{5} \ \ldots$$

$$8 = \frac{8}{1} = \frac{16}{2}$$

$$21 = \frac{21}{1} = \frac{42}{2}$$

$$54 = \frac{54}{1} = \frac{108}{2}$$

- Vrijedi:

  Broj 1 može se zapisati u obliku razlomka s istim brojnikom i nazivnikom.

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

$$1 = \frac{9}{9}$$ jer 9:9= 1

$$1 = \frac{1}{1}$$ jer 1:1= 1

$$1 = \frac{36}{36}$$ jer 36:36= 1

Zadatak:

Jesu li razlomci $\frac{9}{3}$, $\frac{16}{4}$, $\frac{25}{5}$, $\frac{42}{6}$ prirodni brojevi?

Rj. Da, jer je $\frac{9}{3} = 9 : 3 = 3$

$\frac{16}{4} = 16 : 4 = 4$

$\frac{25}{5} = 25 : 5 = 5$ i

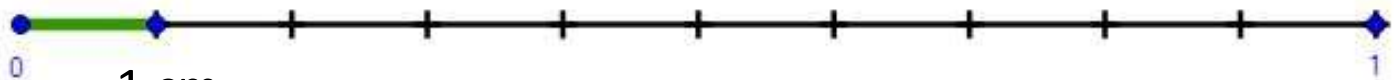
$\frac{42}{6} = 42 : 6 = 7.$

Jesmo li razumijeli?

https://hr.izzi.digital/DOS/204/245.html#block-14122

Razlomci i mjerne jedinice

Koliko centimetara ima 1 dm? 1 dm = 10 cm



1 cm

$\frac{1}{10}$ dm

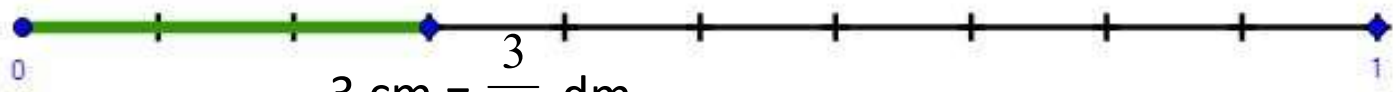
1 dm

10 cm

Koji dio decimetra je 1 cm? 1 cm čini 1 dio od 10 dijelova

1 cm je jedna desetina decimetra.

$$1 \text{ cm} = \frac{1}{10} \text{ dm}$$



3 cm = $\frac{3}{10}$ dm

1 dm = 10 cm

$1\text{ cm} = \frac{1}{10}\text{ dm}$

$4\text{ cm} = \frac{4}{10}\text{ dm}$

1 m = 10 dm

$1\text{ dm} = \frac{1}{10}\text{ m}$

$6\text{ dm} = \frac{6}{10}\text{ m}$

1 m = 100 cm

$1\text{ cm} = \frac{1}{100}\text{m}$

$15\text{ cm} = \frac{15}{100}\text{m}$

1 dm = 100 mm

$1\text{ mm} = \frac{1}{100}\text{dm}$

$3\text{ mm} = \frac{3}{100}\text{dm}$

1 kg = 100 dag

$1\ \text{dag} = \frac{1}{100}\ \text{kg}$

$8\ \text{dag} = \frac{8}{100}\ \text{kg}$

1 h = 60 min

$1\ \text{min} = \frac{1}{60}\ \text{h}$

$12\ \text{min} = \frac{12}{60}\ \text{h}$

1 dan = 24 h

$1\ \text{h} = \frac{1}{24}\ \text{dana}$

$9\ \text{h} = \frac{9}{24}\ \text{dana}$

1 l = 10 dl

$1\ \text{dl} = \frac{1}{10}\ \text{l}$

$5\ \text{dl} = \frac{5}{10}\ \text{l}$

Jesmo li razumijeli?

https://hr.izzi.digital/DOS/204/244.html#block-14058

Postotak i promil

- https://hr.izzi.digital/DOS/204/244.html#block-14066

Ponovimo

1. Koliki dio metra je 4 cm? 4/100 m
2. Koliki dio kilograma je 15 dag? 15/100 kg
3. Koliki dio dana je 7 sati? 7/24 dana
4. Ako 13 kolača ima masu 3 kg, koliku masu ima jedan kolač? 3/13 kg
5. U mjesecu od 30 dana, 20 dana je radno. Koliki dio mjeseca je neradan? 10/30 mjeseca
6. U posudi od 8 litara puno je 5 litara. Koji dio posude je prazan? 3/8 posude
7. Broj 17 napiši kao razlomak. 17/1
8. Broj 6 napiši kao razlomak s nazivnikom 5. 6 = 30/5
9. Broj 4 napiši kao razlomak s brojnikom 20. 4 = 20/5
10. Razlomak s nazivnikom 100 (sto) nazivamo postotak.

Kako izračunati zadani dio cjeline?

- https://hr.izzi.digital/DOS/204/245.html#block-14159