Zakoni računanja z ulomki

1. naloga: Izračunaj kar se da spretno.

a) $\frac{3}{17} + \frac{2}{5} + \frac{3}{5}$

b) $1\frac{2}{7} + 2\frac{5}{7} + 3\frac{2}{3}$

c) $\frac{5}{4} \cdot \frac{8}{15} \cdot \frac{1}{7}$

d) $1\frac{1}{13} \cdot \frac{2}{7} \cdot 2\frac{1}{3}$

e) $\frac{1}{4} + 2\frac{1}{26} + \frac{12}{26} + \frac{2}{7}$

2. naloga: Izračunaj spretno.

a) $\frac{6}{5} \cdot (\frac{5}{3} + \frac{1}{2})$

b) $2\frac{1}{4} \cdot (\frac{1}{7} + 1\frac{6}{7})$

c) $4\frac{2}{7} \cdot (1\frac{1}{6} + \frac{2}{5} + 2\frac{1}{6})$

d) $\frac{1}{7} \cdot \frac{2}{19} + \frac{1}{7} \cdot \frac{4}{19} + \frac{1}{7} \cdot \frac{13}{19}$

Rešitve:

1. naloga

a) $\frac{3}{17}+(\frac{2}{5}+\frac{3}{5})=\frac{3}{7}+1=1\frac{3}{17}$

b) $(1\frac{2}{7}+2\frac{5}{7})+3\frac{2}{3}=4+3\frac{2}{3}=7\frac{2}{3}$

c) $(\frac{5}{4}\cdot\frac{8}{15})\cdot\frac{1}{7}=\frac{2}{3}\cdot\frac{1}{7}=\frac{2}{21}$

d) $1\frac{1}{13}\cdot(\frac{2}{7}\cdot 2\frac{1}{3})=1\frac{1}{13}\cdot(\frac{2}{7}\cdot\frac{7}{3})=1\frac{1}{13}\cdot\frac{2}{3}=\frac{14}{13}\cdot\frac{2}{3}=\frac{28}{39}$

Dvakrat uporabimo zakon o združevanju, kakor nam najbolj ustreza.

e) $\frac{1}{4}+(2\frac{1}{26}+\frac{12}{26})+\frac{2}{7}=\frac{1}{4}+2\frac{1}{2}+\frac{2}{7}=(\frac{1}{4}+2\frac{1}{2})+\frac{2}{7}=2\frac{3}{4}+\frac{2}{7}=3\frac{1}{28}$

2. naloga

a) $\frac{6}{5}\cdot\frac{5}{3}+\frac{6}{5}\cdot\frac{1}{2}=2+\frac{3}{5}=2\frac{3}{5}$

b) $2\frac{1}{4}\cdot 2=4\frac{1}{2}$

c) $\frac{30}{7}\cdot(\frac{7}{6}+\frac{2}{5}+\frac{13}{6})=\frac{30}{7}\cdot\frac{7}{6}+\frac{30}{7}\cdot\frac{2}{5}+\frac{30}{7}\cdot\frac{13}{6}=5+\frac{12}{7}+\frac{65}{7}=16$

d) Zakon o razčlenjevanju uporabimo v nasprotni smeri.

$\frac{1}{7}\cdot\frac{2}{19}+\frac{1}{7}\cdot\frac{4}{19}+\frac{1}{7}\cdot\frac{13}{19}=\frac{1}{7}\cdot(\frac{2}{19}+\frac{4}{19}+\frac{13}{19})=\frac{1}{7}\cdot 1=\frac{1}{7}$