

VAJE – RAČUNANJE Z ULOMKI (2)

Izračunaj.

$$a) 2\frac{2}{3} + 7\frac{3}{4} = 2\frac{8}{12} + 7\frac{9}{12} = 9\frac{17}{12} = 10\frac{5}{12}$$

$$5\frac{1}{2} + 4\frac{2}{3} = 5\frac{3}{6} + 4\frac{4}{6} = 9\frac{7}{6} = 10\frac{1}{6}$$

$$6\frac{5}{7} + 3\frac{1}{4} = 6\frac{20}{28} + 3\frac{7}{28} = 9\frac{27}{28}$$

$$8\frac{9}{10} + 5\frac{4}{5} = 8\frac{9}{10} + 5\frac{8}{10} = 13\frac{17}{10} = 14\frac{7}{10}$$

$$11\frac{1}{4} + 3\frac{4}{5} = 11\frac{5}{20} + 3\frac{16}{20} = 14\frac{21}{20} = 15\frac{1}{20}$$

$$3\frac{2}{9} + \frac{8}{10} = 3\frac{20}{90} + \frac{72}{90} = 3\frac{92}{90} = 4\frac{2}{90} = 4\frac{1}{45}$$

$$b) 6\frac{4}{5} - 3\frac{1}{2} = 6\frac{8}{10} - 3\frac{5}{10} = 3\frac{3}{10}$$

$$4\frac{7}{8} - 1\frac{2}{3} = 4\frac{21}{24} - 1\frac{16}{24} = 3\frac{5}{24}$$

$$3\frac{2}{5} - \frac{1}{10} = 3\frac{4}{10} - \frac{1}{10} = 3\frac{3}{10}$$

$$5\frac{1}{4} - 3\frac{5}{8} = 5\frac{2}{8} - 3\frac{5}{8} = 4\frac{10}{8} - 3\frac{5}{8} = 1\frac{5}{8}$$

$$2\frac{2}{9} - 1\frac{4}{5} = 2\frac{40}{45} - 1\frac{36}{45} = 1\frac{55}{45} - 1\frac{36}{45} = \frac{19}{45}$$

$$5\frac{1}{3} - 2\frac{3}{4} = 5\frac{4}{12} - 2\frac{9}{12} = 4\frac{16}{12} - 2\frac{9}{12} = 2\frac{7}{12}$$

Pred množenjem krajšaj ulomke.

$$a) \frac{2}{3} \cdot \frac{1}{6} = \frac{\cancel{2} \cdot 1 \cdot 1}{3 \cdot \cancel{6} \cdot 3} = \frac{1}{9}$$

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

$$\frac{6}{9} \cdot \frac{1}{5} = \frac{\cancel{6} \cdot 1 \cdot 2}{8 \cdot 5 \cdot 3} = \frac{2}{15}$$

$$b) \frac{8}{15} \cdot \frac{3}{4} = \frac{\cancel{8} \cdot \cancel{3} \cdot 2 \cdot 1}{15 \cdot \cancel{4} \cdot 1 \cdot 5} = \frac{2}{5}$$

$$\frac{9}{20} \cdot \frac{2}{3} = \frac{\cancel{9} \cdot \cancel{2} \cdot 1 \cdot 3}{20 \cdot \cancel{3} \cdot 10 \cdot 1} = \frac{3}{10}$$

$$\frac{14}{15} \cdot \frac{3}{7} = \frac{\cancel{14} \cdot \cancel{3} \cdot 2 \cdot 1}{15 \cdot \cancel{7} \cdot 1 \cdot 5} = \frac{2}{5}$$

Pred množenjem zapiši ulomke v razčlenjenem zapisu samo z ulomkom.

$$a) 1\frac{1}{3} \cdot \frac{4}{5} = \frac{4 \cdot 4}{3 \cdot 5} = \frac{16}{15} = 1\frac{1}{15}$$

$$\frac{2}{7} \cdot 2\frac{1}{3} = \frac{2 \cdot \cancel{7} \cdot 1}{\cancel{7} \cdot 3 \cdot 1} = \frac{2}{3}$$

$$3\frac{1}{2} \cdot 2\frac{1}{3} = \frac{7 \cdot 7}{2 \cdot 3} = \frac{49}{6} = 8\frac{1}{6}$$

$$b) 6\frac{2}{5} \cdot \frac{5}{6} = \frac{\cancel{32} \cdot \cancel{8} \cdot 1 \cdot 16}{8 \cdot \cancel{5} \cdot 1 \cdot 3} = \frac{16}{3} = 5\frac{1}{3}$$

$$4\frac{7}{8} \cdot 1\frac{3}{39} = \frac{\cancel{32} \cdot \cancel{42} \cdot 1 \cdot 7}{8 \cdot \cancel{39} \cdot 1 \cdot 1} = 7$$

$$2\frac{3}{5} \cdot 4\frac{1}{2} = \frac{13 \cdot 9}{5 \cdot 2} = \frac{117}{10} = 11\frac{7}{10}$$

Izračunaj.

$$a) \frac{2}{1} : \frac{2}{3} = \frac{2 \cdot 3 \cdot 1}{1 \cdot 2 \cdot 1} = \frac{3}{1} = 3$$

$$\frac{4}{1} : \frac{3}{5} = \frac{4 \cdot 5}{1 \cdot 3} = \frac{20}{3} = 6 \frac{2}{3}$$

$$\frac{1}{1} : \frac{1}{4} = \frac{1 \cdot 4}{1 \cdot 1} = \frac{4}{1} = 4$$

$$\frac{10}{1} : \frac{3}{7} = \frac{10 \cdot 7}{1 \cdot 3} = \frac{70}{3} = 23 \frac{1}{3}$$

$$b) 1 \frac{2}{5} : \frac{3}{5} = \frac{7 \cdot 8 \cdot 1}{8 \cdot 3 \cdot 1} = \frac{7}{3} = 2 \frac{1}{3}$$

$$2 \frac{4}{9} : \frac{2}{3} = \frac{22 \cdot 3 \cdot 1 \cdot 1}{8 \cdot 2 \cdot 1 \cdot 3} = \frac{11}{8} = 3 \frac{2}{3}$$

$$1 \frac{3}{4} : \frac{1}{2} = \frac{7 \cdot 2 \cdot 1}{4 \cdot 1 \cdot 2} = \frac{7}{2} = 3 \frac{1}{2}$$

$$5 \frac{3}{8} : 1 \frac{1}{4} = \frac{43 \cdot 4 \cdot 1}{8 \cdot 5 \cdot 2} = \frac{43}{10} = 4 \frac{3}{10}$$

Dvojne ulomke zapiši kot količnike dveh ulomkov in izračunaj.

$$a) \frac{\frac{4}{5}}{\frac{2}{3}} = \frac{4 \cdot 3 \cdot 2}{5 \cdot 2 \cdot 1} = \frac{6}{5} = 1 \frac{1}{5}$$

$$b) \frac{\frac{7}{8}}{\frac{3}{4}} = \frac{7 \cdot 4 \cdot 1}{8 \cdot 3 \cdot 2} = \frac{7}{6} = 1 \frac{1}{6}$$

$$c) \frac{1 \frac{1}{2}}{\frac{5}{6}} = \frac{3 \cdot 6 \cdot 3}{2 \cdot 5 \cdot 1} = \frac{9}{5} = 1 \frac{4}{5}$$

$$č) \frac{4}{1 \frac{2}{3}} = \frac{4 \cdot 3}{1 \cdot 5} = \frac{12}{5} = 2 \frac{2}{5}$$

Koliko dobi vsak glede na celoto?

a) Polovico pice si enakomerno razdelita Jure in Metka.

Vsak dobi $\frac{1}{4}$ pice. $\frac{1}{2} : 2 = \frac{1 \cdot 1}{2 \cdot 2} = \frac{1}{4}$

b) Četrtno čokolade razpolovimo.

Vsak dobi $\frac{1}{8}$ čokolade. $\frac{1}{4} : 2 = \frac{1 \cdot 1}{4 \cdot 2} = \frac{1}{8}$

c) Polovico vrečke bonbonov razdelimo na tri enake dele.

Vsak dobi $\frac{1}{6}$ vrečke bonbonov. $\frac{1}{2} : 3 = \frac{1 \cdot 1}{2 \cdot 3} = \frac{1}{6}$

Zapiši številski izraz in izračunaj njegovo vrednost.

Rezultat preveri z žepnim računalom.

a) Količnik ulomkov $\frac{3}{5}$ in $\frac{3}{4}$ zmnoži s številom $\frac{2}{3}$.

$$\frac{3}{5} : \frac{3}{4} \cdot \frac{2}{3} = \frac{3 \cdot 4 \cdot 2 \cdot 1}{5 \cdot 3 \cdot 3 \cdot 1} = \frac{8}{15}$$

b) Produkt števil $1 \frac{1}{2}$ in $\frac{2}{3}$ deli s številom $\frac{7}{9}$.

$$1 \frac{1}{2} \cdot \frac{2}{3} : \frac{7}{9} = \frac{3 \cdot 2 \cdot 2 \cdot 1 \cdot 1}{2 \cdot 3 \cdot 7 \cdot 1 \cdot 1} = \frac{9}{7} = 1 \frac{2}{7}$$

Rešitve najdeš na spletni strani: <https://ajdazubak.splet.arnes.si/7-razred/>