

### Aufgabe 7

$$\frac{2}{7} = \frac{2 \cdot 3}{7 \cdot 3} = \frac{6}{21}$$

$$\frac{2}{7} = \frac{2 \cdot 11}{7 \cdot 11} = \frac{22}{77}$$

$$\frac{2}{7} = \frac{2 \cdot 7}{7 \cdot 7} = \frac{14}{49} \neq \frac{14}{42} \text{ (passt also nicht)}$$

$$\frac{2}{7} = \frac{2 \cdot 10}{7 \cdot 10} = \frac{20}{70}$$

$$\frac{2}{7} = \frac{2 \cdot 2}{7 \cdot 2} = \frac{4}{14} \neq \frac{1}{14} \text{ (passt also nicht)}$$

$$\frac{2}{7} = \frac{2 \cdot 15}{7 \cdot 15} = \frac{30}{105}$$

$$\frac{2}{7} = \frac{2 \cdot 100}{7 \cdot 100} = \frac{200}{700}$$

$$\frac{2}{7} = \frac{2 \cdot 1}{7 \cdot 1} = \frac{2}{7} \neq \frac{20}{7} \text{ (passt also nicht)}$$

### Aufgabe 8

a)

$$\frac{10}{50} = \frac{10 \cdot 2}{50 \cdot 2} = \frac{20}{100}$$

$$\frac{10}{50} = \frac{10 \cdot 1000}{50 \cdot 1000} = \frac{10.000}{50.000}$$

$$\frac{10}{50} = \frac{10 : 10}{50 : 10} = \frac{1}{5}$$

**b)**

$$\frac{16}{32} = \frac{16 : 2}{32 : 2} = \frac{8}{16}$$

$$\frac{16}{32} = \frac{16 : 8}{32 : 8} = \frac{2}{4}$$

$$\frac{16}{32} = \frac{16 : 16}{32 : 16} = \frac{1}{2}$$

**c)**

$$\frac{200}{300} = \frac{200 : 2}{300 : 2} = \frac{100}{150}$$

$$\frac{200}{300} = \frac{200 : 50}{300 : 50} = \frac{4}{6}$$

$$\frac{200}{300} = \frac{200 : 100}{300 : 100} = \frac{2}{3}$$

**d)**

$$\frac{6}{4} = \frac{6 \cdot 2}{4 \cdot 2} = \frac{12}{8}$$

$$\frac{6}{4} = \frac{6 \cdot 10}{4 \cdot 10} = \frac{60}{40}$$

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

e)

$$\frac{6}{11} = \frac{6 \cdot 2}{11 \cdot 2} = \frac{12}{22}$$

$$\frac{6}{11} = \frac{6 \cdot 3}{11 \cdot 3} = \frac{18}{33}$$

$$\frac{6}{11} = \frac{6 \cdot 11}{11 \cdot 11} = \frac{66}{121}$$

f)

$$\frac{25}{5} = \frac{25 \cdot 2}{5 \cdot 2} = \frac{50}{10}$$

$$\frac{25}{5} = \frac{25 \cdot 3}{5 \cdot 3} = \frac{75}{15}$$

$$\frac{25}{5} = \frac{25 : 5}{5 : 5} = \frac{5}{1} = 5$$

g)

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

$$\frac{3}{1} = \frac{3 \cdot 3}{1 \cdot 3} = \frac{9}{3}$$

$$\frac{3}{1} = \frac{3 \cdot 5}{1 \cdot 5} = \frac{15}{5}$$

## Aufgabe 9

a)

$$\frac{1}{2} = \frac{1 \cdot 50}{2 \cdot 50} = \frac{50}{100}$$

$$\frac{12}{20} = \frac{12 \cdot 5}{20 \cdot 5} = \frac{60}{100}$$

$$\frac{3}{4} = \frac{3 \cdot 25}{4 \cdot 25} = \frac{75}{100}$$

$\frac{7}{8}$  geht nicht, weil  $100 : 8 = 12 + 4 : 8$

$$\frac{4}{5} = \frac{4 \cdot 20}{5 \cdot 20} = \frac{80}{100}$$

$\frac{8}{13}$  geht nicht, weil  $100 : 13 = 7 + 9 : 13$

$$\frac{9}{10} = \frac{9 \cdot 10}{10 \cdot 10} = \frac{90}{100}$$

$\frac{3}{40}$  geht nicht, weil  $100 : 40 = 2 + 20 : 40$

b)

$$\frac{1}{2} = \frac{1 \cdot 500}{2 \cdot 500} = \frac{500}{1000}$$

$$\frac{12}{20} = \frac{12 \cdot 50}{20 \cdot 50} = \frac{600}{1000}$$

$$\frac{3}{4} = \frac{3 \cdot 250}{4 \cdot 250} = \frac{750}{1000}$$

$$\frac{7}{8} = \frac{7 \cdot 125}{8 \cdot 125} = \frac{875}{1000}$$

$$\frac{4}{5} = \frac{4 \cdot 200}{5 \cdot 200} = \frac{800}{1000}$$

$$\frac{8}{13} \text{ geht nicht, weil } 1000 : 13 = 76 + 12 : 13$$

$$\frac{9}{10} = \frac{9 \cdot 100}{10 \cdot 100} = \frac{900}{1000}$$

$$\frac{3}{40} = \frac{3 \cdot 25}{40 \cdot 25} = \frac{75}{1000}$$

### Aufgabe 10

$$\frac{48}{100} = \frac{48 : 2}{100 : 2} = \frac{24}{50} = \frac{24 : 2}{50 : 2} = \frac{12}{25}$$

$$\frac{96}{144} = \frac{96 : 4}{144 : 4} = \frac{24}{36} = \frac{24 : 12}{36 : 12} = \frac{2}{3}$$

$$\frac{36}{188} = \frac{36 : 2}{188 : 2} = \frac{18}{94} = \frac{18 : 2}{94 : 2} = \frac{9}{47}$$

$$\frac{50}{75} = \frac{50 : 5}{75 : 5} = \frac{10}{15} = \frac{10 : 5}{15 : 5} = \frac{2}{3}$$