

Brüche addieren

Aufgabe

Addieren Sie die folgenden Brüche und kürzen Sie das Ergebnis so weit wie möglich.

a) $\frac{5}{3} + \frac{4}{5}$

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

c) $\frac{1}{5} + \frac{3}{2}$

d) $\frac{4}{7} + \frac{5}{2}$

e) $\frac{2}{9} + \frac{8}{7}$

f) $\frac{7}{3} + \frac{6}{5}$

g) $\frac{7}{9} + \frac{3}{4}$

h) $\frac{3}{2} + \frac{1}{2}$

i) $\frac{7}{9} + \frac{4}{5}$

j) $\frac{3}{2} + \frac{3}{5}$

k) $\frac{8}{9} + \frac{8}{9}$

l) $\frac{5}{2} + \frac{2}{3}$

m) $\frac{2}{9} + \frac{4}{9}$

n) $\frac{1}{8} + \frac{10}{3}$

o) $\frac{1}{2} + \frac{1}{5}$

p) $\frac{4}{5} + \frac{3}{2}$

q) $\frac{2}{7} + \frac{5}{9}$

r) $\frac{1}{6} + \frac{1}{2}$

s) $\frac{2}{3} + \frac{4}{5}$

t) $\frac{6}{7} + \frac{7}{6}$

u) $\frac{1}{6} + \frac{8}{5}$

v) $\frac{2}{5} + \frac{5}{8}$

w) $\frac{2}{5} + \frac{10}{3}$

x) $\frac{1}{7} + \frac{9}{5}$

y) $\frac{2}{3} + \frac{6}{7}$

z) $\frac{1}{2} + \frac{9}{2}$

Rechenweg

$$\text{a) } \frac{5}{3} + \frac{4}{5} = \frac{5 \cdot 5}{3 \cdot 5} + \frac{4 \cdot 3}{5 \cdot 3} = \frac{25}{15} + \frac{12}{15} = \frac{25 + 12}{15} = \frac{37}{15}$$

$$\text{b) } \frac{7}{2} + \frac{2}{3} = \frac{7 \cdot 3}{2 \cdot 3} + \frac{2 \cdot 2}{3 \cdot 2} = \frac{21}{6} + \frac{4}{6} = \frac{21 + 4}{6} = \frac{25}{6}$$

$$\text{c) } \frac{1}{5} + \frac{3}{2} = \frac{1 \cdot 2}{5 \cdot 2} + \frac{3 \cdot 5}{2 \cdot 5} = \frac{2}{10} + \frac{15}{10} = \frac{2 + 15}{10} = \frac{17}{10}$$

$$\text{d) } \frac{4}{7} + \frac{5}{2} = \frac{4 \cdot 2}{7 \cdot 2} + \frac{5 \cdot 7}{2 \cdot 7} = \frac{8}{14} + \frac{35}{14} = \frac{8 + 35}{14} = \frac{43}{14}$$

$$\text{e) } \frac{2}{9} + \frac{8}{7} = \frac{2 \cdot 7}{9 \cdot 7} + \frac{8 \cdot 9}{7 \cdot 9} = \frac{14}{63} + \frac{72}{63} = \frac{14 + 72}{63} = \frac{86}{63}$$

$$\text{f) } \frac{7}{3} + \frac{6}{5} = \frac{7 \cdot 5}{3 \cdot 5} + \frac{6 \cdot 3}{5 \cdot 3} = \frac{35}{15} + \frac{18}{15} = \frac{35 + 18}{15} = \frac{53}{15}$$

$$\text{g) } \frac{7}{9} + \frac{3}{4} = \frac{7 \cdot 4}{9 \cdot 4} + \frac{3 \cdot 9}{4 \cdot 9} = \frac{28}{36} + \frac{27}{36} = \frac{28 + 27}{36} = \frac{55}{36}$$

$$\text{h) } \frac{3}{2} + \frac{1}{2} = \frac{3 + 1}{2} = \frac{4}{2} = 2$$

$$\text{i) } \frac{7}{9} + \frac{4}{5} = \frac{7 \cdot 5}{9 \cdot 5} + \frac{4 \cdot 9}{5 \cdot 9} = \frac{35}{45} + \frac{36}{45} = \frac{35 + 36}{45} = \frac{71}{45}$$

$$\text{j) } \frac{3}{2} + \frac{3}{5} = \frac{3 \cdot 5}{2 \cdot 5} + \frac{3 \cdot 2}{5 \cdot 2} = \frac{15}{10} + \frac{6}{10} = \frac{15 + 6}{10} = \frac{21}{10}$$

$$\text{k) } \frac{8}{9} + \frac{8}{9} = \frac{8 + 8}{9} = \frac{16}{9}$$

$$\text{l) } \frac{5}{2} + \frac{2}{3} = \frac{5 \cdot 3}{2 \cdot 3} + \frac{2 \cdot 2}{3 \cdot 2} = \frac{15}{6} + \frac{4}{6} = \frac{15 + 4}{6} = \frac{19}{6}$$

$$\text{m) } \frac{2}{9} + \frac{4}{9} = \frac{2 + 4}{9} = \frac{6}{9} = \frac{2}{3}$$

$$\text{n) } \frac{1}{8} + \frac{10}{3} = \frac{1 \cdot 3}{8 \cdot 3} + \frac{10 \cdot 8}{3 \cdot 8} = \frac{3}{24} + \frac{80}{24} = \frac{3 + 80}{24} = \frac{83}{24}$$

$$\text{o) } \frac{1}{2} + \frac{1}{5} = \frac{1 \cdot 5}{2 \cdot 5} + \frac{1 \cdot 2}{5 \cdot 2} = \frac{5}{10} + \frac{2}{10} = \frac{5 + 2}{10} = \frac{7}{10}$$

$$\text{p) } \frac{4}{5} + \frac{3}{2} = \frac{4 \cdot 2}{5 \cdot 2} + \frac{3 \cdot 5}{2 \cdot 5} = \frac{8}{10} + \frac{15}{10} = \frac{8 + 15}{10} = \frac{23}{10}$$

$$\text{q) } \frac{2}{7} + \frac{5}{9} = \frac{2 \cdot 9}{7 \cdot 9} + \frac{5 \cdot 7}{9 \cdot 7} = \frac{18}{63} + \frac{35}{63} = \frac{18 + 35}{63} = \frac{53}{63}$$

$$\text{r) } \frac{1}{6} + \frac{1}{2} = \frac{1}{6} + \frac{1 \cdot 3}{2 \cdot 3} = \frac{1}{6} + \frac{3}{6} = \frac{1 + 3}{6} = \frac{4}{6} = \frac{2}{3}$$

$$\text{s) } \frac{2}{3} + \frac{4}{5} = \frac{2 \cdot 5}{3 \cdot 5} + \frac{4 \cdot 3}{5 \cdot 3} = \frac{10}{15} + \frac{12}{15} = \frac{10 + 12}{15} = \frac{22}{15}$$

$$\text{t) } \frac{6}{7} + \frac{7}{6} = \frac{6 \cdot 6}{7 \cdot 6} + \frac{7 \cdot 7}{6 \cdot 7} = \frac{36}{42} + \frac{49}{42} = \frac{36 + 49}{42} = \frac{85}{42}$$

$$\text{u) } \frac{1}{6} + \frac{8}{5} = \frac{1 \cdot 5}{6 \cdot 5} + \frac{8 \cdot 6}{5 \cdot 6} = \frac{5}{30} + \frac{48}{30} = \frac{5 + 48}{30} = \frac{53}{30}$$

$$\text{v) } \frac{2}{5} + \frac{5}{8} = \frac{2 \cdot 8}{5 \cdot 8} + \frac{5 \cdot 5}{8 \cdot 5} = \frac{16}{40} + \frac{25}{40} = \frac{16 + 25}{40} = \frac{41}{40}$$

$$\text{w) } \frac{2}{5} + \frac{10}{3} = \frac{2 \cdot 3}{5 \cdot 3} + \frac{10 \cdot 5}{3 \cdot 5} = \frac{6}{15} + \frac{50}{15} = \frac{6 + 50}{15} = \frac{56}{15}$$

$$\text{x) } \frac{1}{7} + \frac{9}{5} = \frac{1 \cdot 5}{7 \cdot 5} + \frac{9 \cdot 7}{5 \cdot 7} = \frac{5}{35} + \frac{63}{35} = \frac{5 + 63}{35} = \frac{68}{35}$$

$$\text{y) } \frac{2}{3} + \frac{6}{7} = \frac{2 \cdot 7}{3 \cdot 7} + \frac{6 \cdot 3}{7 \cdot 3} = \frac{14}{21} + \frac{18}{21} = \frac{14 + 18}{21} = \frac{32}{21}$$

$$\text{z) } \frac{1}{2} + \frac{9}{2} = \frac{1 + 9}{2} = \frac{10}{2} = 5$$

Lösung

a) $\frac{37}{15}$

f) $\frac{53}{15}$

k) $\frac{16}{9}$

p) $\frac{23}{10}$

u) $\frac{53}{30}$

z) 5

b) $\frac{25}{6}$

g) $\frac{55}{36}$

l) $\frac{19}{6}$

q) $\frac{53}{63}$

v) $\frac{41}{40}$

c) $\frac{17}{10}$

h) 2

m) $\frac{2}{3}$

r) $\frac{2}{3}$

w) $\frac{56}{15}$

d) $\frac{43}{14}$

i) $\frac{71}{45}$

n) $\frac{83}{24}$

s) $\frac{22}{15}$

x) $\frac{68}{35}$

e) $\frac{86}{63}$

j) $\frac{21}{10}$

o) $\frac{7}{10}$

t) $\frac{85}{42}$

y) $\frac{32}{21}$