

S. 20/1

$$c) \frac{13}{6} = 13:6 = 2,1\bar{6}$$

$$\begin{array}{r} 12 \\ \underline{-10} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$$\frac{22}{15} = 22:15 = 1,4\bar{6}$$

$$\begin{array}{r} 15 \\ \underline{-15} \\ 70 \\ \underline{-60} \\ 100 \\ \underline{-90} \\ 10 \end{array}$$

$$\frac{23}{22} = 23:22 = 1,0\bar{45}$$

$$\begin{array}{r} 22 \\ \underline{-10} \\ 100 \\ \underline{-88} \\ 120 \\ \underline{-110} \\ 10 \end{array}$$

$$\frac{37}{30} = 37:30 = 1,2\bar{3}$$

$$\begin{array}{r} 30 \\ \underline{-30} \\ 60 \\ \underline{-60} \\ 90 \\ \underline{-90} \\ 0 \end{array}$$

$$\frac{11}{9} = 11:9 = 1,2$$

$$\begin{array}{r} 9 \\ \underline{-9} \\ 20 \\ \underline{-18} \\ 2 \end{array}$$

$$\frac{15}{11} = 15:11 = 1,3\bar{6}$$

$$\begin{array}{r} 11 \\ \underline{-11} \\ 40 \\ \underline{-33} \\ 70 \\ \underline{-66} \\ 4 \end{array}$$

$$\frac{50}{33} = 50:33 = 1,5\bar{1}$$

$$\begin{array}{r} 33 \\ \underline{-33} \\ 170 \\ \underline{-165} \\ 50 \\ \underline{-33} \\ 17 \end{array}$$

S. 20/1

$$b) \frac{2}{3} = 2:3 = 0,6$$

$$\begin{array}{r} 20 \\ \underline{-18} \\ 2 \end{array}$$

$$\frac{5}{6} = 5:6 = 0,8\bar{3}$$

$$\begin{array}{r} 50 \\ \underline{-48} \\ 20 \\ \underline{-18} \\ 2 \end{array}$$

$$\frac{7}{36} = 7:36 = 0,19\bar{4}$$

$$\begin{array}{r} 70 \\ \underline{-36} \\ 340 \\ \underline{-324} \\ 160 \\ \underline{-144} \\ 16 \end{array}$$

$$\frac{1}{24} = 1:24 = 0,041\bar{6}$$

$$\begin{array}{r} 10 \\ \underline{-9} \\ 100 \\ \underline{-96} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$$\frac{5}{12} = 5:12 = 0,41\bar{6}$$

$$\begin{array}{r} 50 \\ \underline{-48} \\ 20 \\ \underline{-12} \\ 80 \\ \underline{-72} \\ 8 \end{array}$$

$$\frac{7}{30} = 7:30 = 0,2\bar{3}$$

$$\begin{array}{r} 70 \\ \underline{-60} \\ 100 \\ \underline{-90} \\ 10 \end{array}$$

$$\frac{11}{18} = 11:18 = 0,6\bar{1}$$

$$\begin{array}{r} 110 \\ \underline{-108} \\ 20 \\ \underline{-18} \\ 2 \end{array}$$

S. 20/2

auswendig (!) $\frac{2}{3} = 0,6$; $\frac{1}{5} = 0,2$

$$\frac{1}{6} = 1:6 = 0,1\bar{6}$$

$$\begin{array}{r} 10 \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$$\frac{4}{9} = 4:9 = 0,4$$

$$\begin{array}{r} 40 \\ \underline{-36} \\ 4 \end{array}$$

$$\frac{2}{7} = 2:7 = 0,285714$$

$$\begin{array}{r} 20 \\ \underline{-14} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-35} \\ 50 \\ \underline{-49} \\ 10 \\ \underline{-7} \\ 30 \\ \underline{-28} \\ 2 \end{array}$$

S. 20/6

Zunächst alle Brüche in Dezimalbrüche umwandeln

$$\frac{15}{27} = \frac{5}{9} = 5:9 = 0,5\bar{5}$$

$$\begin{array}{r} 50 \\ \underline{-45} \\ 5 \end{array}$$

$$\frac{11}{20} = 11:20 = 0,55$$

$$\begin{array}{r} 110 \\ \underline{-100} \\ 100 \\ \underline{-100} \\ 0 \end{array}$$

$$\frac{6}{11} = 6:11 = 0,54$$

$$\begin{array}{r} 60 \\ \underline{-55} \\ 50 \\ \underline{-44} \\ 6 \end{array}$$

$$\frac{7}{12} = 7:12 = 0,58\bar{3}$$

$$\begin{array}{r} 70 \\ \underline{-60} \\ 100 \\ \underline{-96} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

Ordnen

$$0,54 < 0,55 < 0,5 < 0,56 < 0,5\bar{5}$$

$$\left(\frac{6}{11}\right) \quad \left(\frac{11}{20}\right) \quad \left(\frac{15}{27}\right)$$

$$< 0,5\bar{6} < 0,58\bar{3} < 0,6\bar{5}$$

$$\left(\frac{7}{12}\right)$$

S. 70/11

$a) 0,1\bar{7} = 7 \cdot 0,1\bar{1} = 7 \cdot \frac{1}{9} = \frac{7}{9}$
 $b) 0,2\bar{2} = 2 \cdot 0,1\bar{1} = 2 \cdot \frac{1}{9} = \frac{2}{9}$
 $c) 0,5\bar{5} = 5 \cdot 0,1\bar{1} = 5 \cdot \frac{1}{9} = \frac{5}{9}$
 $d) 0,4\bar{4} = 4 \cdot 0,1\bar{1} = 4 \cdot \frac{1}{9} = \frac{4}{9}$
 $e) 1,3\bar{3} = 1 + 0,3\bar{3} = 1\frac{1}{3}$ (siehe b)
 $f) 2,2\bar{2} = 2\frac{2}{9}$
 $g) 5,1\bar{6} = 5 + 0,1\bar{6} = 5\frac{1}{6}$
 $h) 0,9\bar{9} = 2$

S. 72/8

$\frac{1}{3} = 0,3\bar{3} \approx 0,33$

$\frac{4}{6} = 0,1\bar{6} \approx 0,17$

$\frac{1}{7} = 1:7 = 0,142... \approx 0,14$

$$\begin{array}{r} 10 \\ 7 \\ \hline 30 \\ 28 \\ \hline 20 \\ 14 \\ \hline \dots \end{array}$$

$\frac{1}{8} = 0,125 \approx 0,13$

$\frac{1}{9} = 0,1\bar{1} \approx 0,11$

$\frac{1}{11} = 1:11 = 0,090909... = 0,0\bar{9} \approx 0,09$

$\frac{1}{12} = 1:12 = 0,08\bar{3} \approx 0,08$

S. 72/9

a) $\frac{2}{3} = 0,6\bar{6}$; $\frac{3}{5} = 0,6$; $\frac{7}{10} = 0,7$; $\frac{34}{50} = \frac{68}{100} = 0,68$

$\frac{3}{5} < \frac{2}{3} < \frac{34}{50} < \frac{7}{10}$

b) $\frac{10}{3} = 3,3\bar{3}$; $\frac{19}{6} = 3\frac{1}{6} = 3,1\bar{6}$; $\frac{33}{10} = 3,3$

$\frac{54}{17} = 54:17 = 3,17...$

$$\begin{array}{r} 51 \\ 30 \\ 17 \\ \hline 130 \\ 113 \\ \hline 17 \\ \dots \end{array}$$

$\frac{19}{6} < \frac{54}{17} < \frac{33}{10} < \frac{10}{3}$

c) $\frac{12}{5} = 1,4$

$\frac{15}{11} = 15:11 = 1,3\bar{6}$

$$\begin{array}{r} 11 \\ 40 \\ 33 \\ \hline 70 \\ 66 \\ \hline 4 \\ \dots \end{array}$$

$\frac{12}{7} = 10:7 = 1,428571$

$$\begin{array}{r} 7 \\ 30 \\ 28 \\ \hline 20 \\ 14 \\ \hline 60 \\ 56 \\ \hline 40 \\ 28 \\ \hline 12 \\ 7 \\ \hline 5 \\ \dots \end{array}$$

$\frac{18}{13} = 18:13 = 1,384615$

$$\begin{array}{r} 13 \\ 50 \\ 39 \\ \hline 110 \\ 104 \\ \hline 60 \\ 52 \\ \hline 80 \\ 78 \\ \hline 20 \\ 13 \\ \hline 7 \\ 5 \\ \hline 15 \\ \dots \end{array}$$

$\frac{15}{11} < \frac{18}{13} < 1\frac{2}{5} < \frac{10}{7}$
 $\approx 1,37 < \approx 1,38 < 1,4 < \approx 1,43$