

Bruchrechnen Aufgabe 69

$$1 \frac{5}{12} * 10 \frac{1}{2} + 42 \frac{3}{8} : 6$$

$$66 \frac{1}{4} : 3 \frac{3}{4} - 3 \frac{17}{20} * 1 \frac{1}{14}$$

$$\frac{(1 * 12 + 5) * (10 * 2 + 1)}{12 * 2} + \frac{(42 * 8 + 3) : 6}{8}$$

$$\frac{(66 * 4 + 1)}{4} : \frac{(3 * 4 + 3)}{4} - \frac{(3 * 20 + 17) * (1 * 14 + 1)}{20 * 14}$$

$$\begin{array}{r} 17 * 21 \quad 339 \\ \hline 24 \quad 6 * 8 \end{array} + \frac{357}{24} + \frac{339}{48} = \frac{265 * 4}{4 * 15} - \frac{77 * 15}{20 * 14} = \frac{1060}{60} - \frac{1155}{280}$$

Zähler:

$$24 = 2 * 2 * 2 * 3$$

$$48 = 2 * 24$$

$$\text{Hauptnenner Zähler} = 2 * 24 = 48$$

Nenner:

$$60 = 2 * 2 * 3 * 5$$

$$280 = 2 * 2 * 2 * 5 * 7$$

$$\text{Hauptnenner Nenner} = 2 * 2 * 2 * 3 * 5 * 7 = 840$$

$$\frac{2 * 357 + 339}{48} = \frac{1053}{48} = \frac{1053 * 840}{48 * 11375} = \frac{1060 * 14 - 3 * 1155}{840} = \frac{7325}{840}$$

$$= \frac{3 * 3 * 3 * 3 * \cancel{13} * 2 * 2 * 2 * 3 * 5 * 7}{2 * 2 * 2 * 2 * 3 * 5 * 5 * 5 * 7 * \cancel{13}} = \frac{3 * 3 * 3 * 3}{2 * 5 * 5} = \frac{81}{50}$$