

FRACCIONES

Problema 7

Resolver:

$$\left(3\frac{1}{3} + \frac{2}{10}\frac{1}{2} - \frac{5}{18} \times \frac{4}{7}\right) \times 1,75 \times \frac{1}{2 + \frac{3}{4 + \frac{1}{\frac{5}{5}}}} \times \frac{374}{319} : \left(1,5 - \frac{23}{38}\right)$$

Solución problema 7:

Convertimos los números mixtos en fracciones ordinarias;

$$3\frac{1}{3} = \frac{9+1}{3} = \frac{10}{3}$$

$$10\frac{1}{2} = \frac{20+1}{2} = \frac{21}{2}$$

Convertimos las fracciones decimales en fracciones ordinarias;

$$1,75 = \frac{175}{100} = \frac{5 \times 35}{5 \times 20} = \frac{35}{20}$$

$$1,5 = \frac{15}{10} = \frac{5 \times 3}{5 \times 2} = \frac{3}{2}$$

Operamos fracción de fracción

$$2 + \frac{3}{4 + \frac{1}{\frac{5}{6}}} = 2 + \frac{3}{4 + \frac{5}{6}} = 2 + \frac{3}{\frac{29}{6}} = 2 + \frac{18}{29} = \frac{58 + 18}{29} = \frac{76}{29}$$

Sustituimos los valores en la fracción inicial

$$\left(\frac{10}{3} + \frac{2}{21} - \frac{5}{18} \times \frac{4}{7} \right) \times \frac{35}{20} \times \frac{1}{\frac{76}{29}} \times \frac{374}{319} \div \left(\frac{3}{2} - \frac{23}{38} \right)$$

$$\left(\frac{10}{21} + \frac{4}{21} - \frac{5}{18} \times \frac{4}{7}\right) \times \frac{35}{20} \times \frac{29}{76} \times \frac{374}{319} : \left(\frac{57-23}{38}\right)$$

$$\left(\frac{14}{21} - \frac{20}{126}\right) \times \frac{35}{20} \times \frac{29}{76} \times \frac{374}{319} : \frac{34}{38} =$$

$$\left(\frac{14x6 - 20}{126}\right) \times \frac{35}{20} \times \frac{29}{76} \times \frac{374}{319} : \frac{34}{38} =$$

$$\left(\frac{84 - 20}{126}\right) \times \frac{35}{20} \times \frac{29}{76} \times \frac{374}{319} : \frac{34}{38} = \frac{64}{126} \times \frac{35}{20} \times \frac{29}{38 \times 2} \times \frac{374}{11 \times 29} \times \frac{38}{34} = \frac{2 \times 32}{2 \times 63} \times \frac{5 \times 7}{5 \times 4} \times \frac{1}{2} \times \frac{34 \times 11}{11} \times \frac{1}{34}$$

$$\frac{32}{63} \times \frac{7}{4} \times \frac{1}{2} = \frac{16 \times 7}{63 \times 4} = \frac{4 \times 7}{9 \times 7} = \frac{4}{9}$$