

Operaciones combinadas de fracciones

Efectúa las siguientes operaciones simplificando cuando sea posible:

$$1) \left(3 - \frac{15}{4}\right) \cdot \left[\sqrt{\frac{16}{9}} - \frac{1}{2} \cdot \left(\frac{2}{6} + \frac{3}{4}\right)\right] = \frac{-19}{32}$$

$$2) \left[\left(3 - \frac{1}{5}\right) : \left(\frac{2}{10} + 2^2\right)\right] \cdot \left(1 + \frac{1}{2} + \frac{1}{4}\right) = \frac{7}{6}$$

$$3) \left(3 - \frac{-3}{4}\right) \cdot \left[\frac{-5}{3} - \frac{1}{3} : \left(\frac{2}{5} + \frac{3}{4}\right)\right] = \frac{675}{92}$$

$$4) \left[\left(-2 - \frac{1}{5}\right) : \left(\frac{-3}{25} + 4\right)\right] \cdot \left(1 - \frac{1}{2} - \frac{1}{5}\right) = \frac{33}{194}$$

$$5) \frac{5}{18} + \frac{3}{10} - \frac{7}{24} \cdot \left(\frac{4}{3}\right)^2 = \frac{8}{135}$$

$$6) 3 - \left(2 - \frac{5}{6}\right) \cdot \frac{2}{7} - \left(\frac{4}{9} + \frac{2}{5}\right) : \frac{38}{15} = \frac{7}{3}$$

$$7) \left[\left(-\frac{5}{3}\right)^2\right]^3 : \left[\left(-\frac{5}{3}\right)^3 \cdot \left(-\frac{5}{3}\right)^2\right] = -\frac{5}{3}$$

$$8) \frac{2}{5} \cdot \frac{10}{6} + (-3) \cdot \left(\frac{2}{5} + \frac{4}{15}\right) = \frac{-4}{3}$$

$$9) \left(3 - \frac{15}{4}\right) \cdot \left[\frac{4}{7} - 2 \cdot \left(\frac{4}{5} + \frac{3}{4}\right)\right] = \frac{531}{280}$$

$$10) 2 - \frac{4}{3} \cdot \left[\frac{5}{24} - \left(\frac{2}{3}\right)^2\right] - \left(2 - \frac{3}{4}\right) : \left(\frac{5}{2} + 2\right) = \frac{38}{27}$$

$$11) 4 - 1 : \frac{4}{3} \cdot \left(\frac{5}{24} - \frac{4}{9}\right) - \left(2 - \frac{3}{4}\right) : \left(\frac{5}{2} + 2\right) = \frac{1123}{288}$$

$$12) 2 \cdot \frac{3}{5} - \frac{108}{7} \cdot \left(\frac{3}{4} - \frac{5}{12} - \frac{4}{27}\right) = \frac{-58}{35}$$

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$$13) 5 - 3 : \left(\frac{8}{9} - \frac{5}{3} \right) \cdot \left(\frac{6}{5} + \frac{1}{3} \right) = \frac{382}{35}$$

$$14) \left[\frac{2}{5} \cdot \frac{10}{6} + (-3) \left(\frac{2}{3} + \frac{4}{15} \right) \right] : \left(\frac{3}{5} - 1 \right) = \frac{16}{3}$$

$$15) \frac{7}{20} - \frac{3}{10} + \frac{3}{56} : \frac{2}{7} = \frac{19}{80}$$

$$16) \left[2 - \left(\frac{5}{6} - 1 \right) \right] \cdot \frac{6}{5} - \left(\frac{2}{9} - \frac{1}{3} \right) : \left(\frac{3}{2} \right)^2 = \frac{137}{135}$$