



--- Operaciones combinadas con quebrados / fracciones ---

Solución

* *Calcula y simplifica siempre que puedas.*

$$\begin{aligned} \left[\left(\frac{6}{3} + \frac{4}{3} \right) + \left(\frac{2}{3} + \frac{5}{3} \right) \right] \times \left(\frac{4}{5} - \frac{2}{5} \right) &= \left(\frac{5}{3} + \frac{8}{3} \right) \times \left[\left(\frac{10}{2} + 2 \right) + \left(\frac{4}{2} - \frac{1}{2} \right) \right] = \\ \left[\frac{10}{3} + \frac{7}{3} \right] \times \left(\frac{4}{5} - \frac{2}{5} \right) &= \left(\frac{5}{3} + \frac{8}{3} \right) \times \left[\frac{14}{2} + \frac{3}{2} \right] = \\ \frac{17}{3} \times \left(\frac{4}{5} - \frac{2}{5} \right) &= \left(\frac{5}{3} + \frac{8}{3} \right) \times \frac{17}{2} = \\ \frac{17}{3} \times \frac{2}{5} &= \frac{13}{3} \times \frac{17}{2} = \\ \frac{34}{15} &= \frac{221}{6} \end{aligned}$$

$$\begin{aligned} 2 + \left[\left(\frac{8}{3} + \frac{2}{3} \right) \times \left(\frac{10}{3} - 2 \right) \right] &= \left[\left(\frac{4}{3} + \frac{2}{3} \right) - \left(\frac{5}{3} - \frac{1}{3} \right) \right] \times \left(\frac{4}{5} + \frac{2}{5} \right) = \\ 2 + \left[\frac{10}{3} \times \frac{4}{3} \right] &= \left[\frac{6}{3} - \frac{4}{3} \right] \times \left(\frac{4}{5} + \frac{2}{5} \right) = \\ 2 + \frac{40}{9} &= \frac{2}{3} \times \frac{6}{5} \quad \begin{matrix} 3 \\ 5 \end{matrix} \\ \frac{58}{9} &= \frac{12}{5} = \frac{4}{5} \end{aligned}$$

$$\begin{aligned} \left(\frac{2}{3} + \frac{5}{3} \right) \times (10 : 5) + \left(9 + \frac{1}{3} \right) &= 64 : 8 + \left[\left(\frac{3}{7} + \frac{5}{7} \right) \times \left(\frac{8}{2} - \frac{3}{2} \right) \right] = \\ \frac{7}{3} \times (10 : 5) + \left(9 + \frac{1}{3} \right) &= 64 : 8 + \left[\frac{8}{7} \times \frac{5}{2} \right] = \\ \frac{7}{3} \times 2 + \left(9 + \frac{1}{3} \right) &= 64 : 8 + \frac{40}{14} = \\ \frac{7}{3} \times 2 + \frac{28}{3} &= 8 + \frac{40}{14} = \\ \frac{14}{3} + \frac{28}{3} &= \frac{152}{14} \quad \begin{matrix} :2 \\ 7 \end{matrix} = \frac{76}{7} \\ \frac{42}{3} & \end{aligned}$$



$$\left(\frac{21}{4} - 5\right) + \left(8 + \frac{3}{4}\right) + 6 =$$

$$\frac{1}{4} + \frac{35}{4} + 6$$

$$\frac{36}{4} + 6$$

$$\frac{60}{4} \stackrel{:2}{=} \frac{30}{2} \stackrel{:2}{=} 15$$

$$\left[6 + \left(\frac{8}{2} - \frac{3}{2}\right)\right] \times 3 =$$

$$\left[6 + \frac{5}{2}\right] \times 3$$

$$\frac{17}{2} \times 3$$

$$\frac{51}{2}$$

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

$$\left(\frac{10}{5} - \frac{4}{5}\right) \times \left(3 + \frac{2}{6}\right)$$

$$\frac{6}{5} \times \frac{20}{6}$$

$$\frac{120}{30} \stackrel{:10}{=} \frac{12}{3} \stackrel{:3}{=} 4$$

$$\left(\frac{64}{3} - 9\right) + \left(\frac{18}{3} - \frac{7}{3}\right) + 4 =$$

$$\frac{37}{3} + \frac{11}{3} + 4$$

$$\frac{48}{3} + 4$$

$$\frac{60}{3} \stackrel{:3}{=} 20$$

$$\left[\left(\frac{19}{8} + \frac{6}{8}\right) - 3\right] \times 5 + \frac{11}{8} =$$

$$\left[\frac{25}{8} - 3\right] \times 5 + \frac{11}{8}$$

$$\frac{1}{8} \times 5 + \frac{11}{8}$$

$$\frac{5}{8} + \frac{11}{8}$$

$$\frac{16}{8} \stackrel{:2}{=} 2$$

$$32 : 8 + 25 : 5 + \frac{4}{3} - 7 =$$

$$4 + 25 : 5 + \frac{4}{3} - 7$$

$$4 + 5 + \frac{4}{3} - 7$$

$$4 + 5 + \frac{4}{3} - 7$$

$$9 + \frac{4}{3} - 7$$

$$\frac{31}{3} - 7$$

$$\frac{10}{3}$$