

Operar las siguientes fracciones de términos racionales, **simplificando en todo momento** los pasos intermedios y el resultado:

$$1. \frac{\frac{1}{3} : \left(2 + \frac{2}{5} \cdot \frac{25}{8} \right)}{\left(-\frac{2}{5} + \frac{1}{3} : 2 \right) \cdot \frac{25}{8}} =$$

(Soluc: -64/455)

$$2. \frac{\frac{1}{5} + \frac{3}{5} \cdot \frac{25}{6} - 2 : \frac{4}{9}}{\frac{4}{9} \left(\frac{1}{5} - 2 \right) - \frac{1}{3}} =$$

(Soluc: 27/17)

$$3. \frac{2 - \frac{5}{3} : \left(1 + \frac{1}{5} \right) - 2}{2 : \frac{5}{3} + 1 - \frac{1}{5} : 2} =$$

(Soluc: -125/189)

$$4. \frac{\frac{3}{5} : \frac{1}{2} + \frac{2}{5} - \frac{1}{5} : \left(\frac{3}{5} \cdot \frac{10}{9} \right)}{\frac{3}{5} + \frac{1}{5} : \frac{2}{5} \cdot \frac{1}{5} \left(\frac{3}{5} + \frac{10}{9} \right)} =$$

(Soluc: 585/347)

$$5. 1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{2}}} =$$

(Soluc: 8/5)



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

(Soluc: 311/342)

$$7. 3 + \frac{2}{3 + \frac{2}{3 + \frac{2}{3}}} =$$

(Soluc: 139/39)

$$8. \frac{\frac{1}{2} \frac{8}{3} + \frac{3}{5} : \frac{9}{25} - 1}{\frac{1}{2} \left(\frac{8}{3} + \frac{3}{5}\right) : \frac{9}{25} + 1} =$$

(Soluc: 1/2)

$$9. \frac{\frac{3}{5} : 3 - 2 \frac{3}{8} + \frac{2}{3}}{\frac{2}{3} + \frac{1}{3} \left(\frac{2}{4} + \frac{1}{6}\right) - 3} =$$

(Soluc: -21/380)

$$10. \frac{\left[\left(\frac{1}{2} + \frac{3}{27}\right) \frac{2}{5} - 3\right] : \frac{3}{2}}{\left(\frac{1}{2} + \frac{3}{2}\right) \frac{8}{27} \left(\frac{2}{5} - 3 : \frac{3}{2}\right)} =$$

(Soluc: 59/32)

$$11. 1 + \frac{2}{3 + \frac{4}{5 + \frac{6}{7}}} =$$

(Soluc: 233/151)

$$12. \frac{\frac{3}{2} + \frac{1}{2} \left(\frac{2}{3} - \frac{3}{5} - 3\right) + \frac{29}{6} : 5}{1 + \frac{2}{3 + \frac{4}{5}} : \left(2 - \frac{28}{19}\right)} =$$

(Soluc: 1/2)

$$13. \frac{\frac{3}{2} - \frac{2}{3} + \frac{15}{8} - \frac{2}{3}}{\frac{2}{3} \left(-\frac{9}{10} \right) - \left(\frac{2}{3} - \frac{1}{3} - \frac{12}{5} \right)} =$$

(Soluc: -125/28)

$$14. \frac{\frac{4}{3} - \frac{2}{3} \left(2 - \frac{2}{3} + \frac{1}{5} \right) : \frac{2}{5} - \frac{1}{5}}{\frac{4}{3} - \frac{2}{3} : 2 - \left(\frac{2}{3} + \frac{1}{5} : \frac{2}{5} \right) - \frac{1}{5}} =$$

(Soluc: 128/33)

$$15. \frac{\left(\frac{3}{5} - \frac{1}{6} + \frac{2}{24} \right) - \left(\frac{2}{30} - \frac{1}{4} + \frac{3}{9} \right)}{\left(\frac{1}{3} - \frac{5}{10} \right) : \frac{5}{3} - \frac{4}{16} \left(3 - \frac{5}{3} \right)} =$$

(Soluc: -11/13)

$$16. \frac{\left(\frac{1}{5} + 2 - \frac{1}{3} \right) : \frac{1}{5} + \frac{3}{2}}{\frac{1}{5} + \left(2 - \frac{1}{3} : \frac{1}{5} \right) \cdot \frac{3}{2}} =$$

(Soluc: 325/21)

$$17. \frac{\frac{3}{2} \left(\frac{2}{5} + 3 : \frac{6}{5} \right) - \frac{7}{20}}{\left(3 + \frac{3}{2} \cdot \frac{4}{10} \right) : \frac{6}{5} - \frac{4}{5}} =$$

(Soluc: 20/11)

$$18. \frac{\left(\frac{2}{3} + -4 + \frac{1}{5} \right) : \frac{2}{3} + \frac{1}{3}}{\frac{2}{3} - \left(4 + \frac{1}{5} : \frac{2}{3} \right) \cdot \frac{1}{3}} =$$

(Soluc: 131/23)