

Ejercicios de repaso tema 3:

Os dejo algunos ejercicios con solución para que podáis repasar un poquito más, ya que en el libro hay pocos ejercicios de este tipo.



1 $\left(\frac{2}{3}\right)^2 \cdot \left(\frac{2}{3}\right)^3 =$

2 $\left(\frac{2}{3}\right)^{-2} \cdot \left(\frac{2}{3}\right)^3 =$

3 $\left(\frac{2}{3}\right)^2 \cdot \left(\frac{2}{3}\right)^{-3} =$

4 $\left(\frac{2}{3}\right)^{-2} \cdot \left(\frac{2}{3}\right)^{-3} =$

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

6 $\left(\frac{2}{3}\right)^2 : \left(\frac{2}{3}\right)^3 =$

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

8 $\left(\frac{2}{3}\right)^2 : \left(\frac{2}{3}\right)^{-3} =$

9 $\left(\frac{2}{3}\right)^{-2} : \left(\frac{2}{3}\right)^{-3} =$

10 $\left(\frac{3}{2}\right)^{-2} : \left(\frac{2}{3}\right)^{-3} =$

11 $\left[\left(\frac{2}{3}\right)^2\right]^3 =$

12 $\left\{\left[\left(\frac{2}{3}\right)^2\right]^3\right\}^{-4} =$

13 $\left(\frac{4}{9}\right)^{-2} : \left(\frac{27}{8}\right)^{-3} =$

Soluciones: ejercicio 18

http://www.vitutor.com/di/r/ejercicios_fracciones.html

16 ▲▲△ Calcula y simplifica:

a) $2 - \left(1 + \frac{2}{3}\right)$

b) $1 - \left(\frac{3}{10} + \frac{5}{6}\right)$

c) $\left(2 - \frac{3}{4}\right) - \left(1 - \frac{1}{4}\right)$

d) $\left(\frac{5}{6} + \frac{2}{3}\right) - \left(\frac{3}{2} - \frac{1}{4}\right)$

e) $\left(\frac{3}{2} - \frac{4}{5}\right) - \left(\frac{1}{5} - \frac{2}{3}\right) - \frac{1}{2}$

f) $\left(4 - \frac{5}{8}\right) - \left(5 - \frac{3}{4}\right) + \left(3 - \frac{1}{2} - \frac{3}{8}\right)$

g) $\frac{5}{6} - \left[1 - \left(\frac{1}{4} + \frac{2}{3}\right)\right]$

h) $\left[2 - \left(\frac{1}{2} + \frac{1}{3}\right)\right] - \left[1 + \left(\frac{1}{2} - \frac{1}{3}\right)\right]$

i) $\left[\frac{1}{2} - \left(1 - \frac{1}{3}\right)\right] + \left[\frac{1}{2} - \left(1 - \frac{1}{4}\right)\right] + \left[\frac{1}{2} - \left(1 - \frac{1}{6}\right)\right]$

Soluciones:

$$\text{a) } 2 - \left(1 + \frac{2}{3}\right) = 2 - \frac{5}{3} = \frac{6}{3} - \frac{5}{3} = \frac{1}{3}$$

$$\text{b) } 1 - \left(\frac{3}{10} + \frac{5}{6}\right) = 1 - \left(\frac{9}{30} + \frac{25}{30}\right) = \frac{30}{30} - \frac{34}{30} = \frac{-4}{30} = \frac{-2}{15}$$

$$\text{c) } \left(2 - \frac{3}{4}\right) - \left(1 - \frac{1}{4}\right) = \frac{5}{4} - \frac{3}{4} = \frac{2}{4} = \frac{1}{2}$$

$$\text{d) } \left(\frac{5}{6} + \frac{2}{3}\right) - \left(\frac{3}{2} - \frac{1}{4}\right) = \frac{9}{6} - \frac{5}{4} = \frac{18}{12} - \frac{15}{12} = \frac{3}{12} = \frac{1}{4}$$

$$\begin{aligned} \text{e) } \left(\frac{3}{2} - \frac{4}{5}\right) - \left(\frac{1}{5} - \frac{2}{3}\right) - \frac{1}{2} &= \left(\frac{15}{10} - \frac{8}{10}\right) - \left(\frac{3}{15} - \frac{10}{15}\right) - \frac{1}{2} = \frac{7}{10} + \frac{7}{15} - \frac{1}{2} = \\ &= \frac{21}{30} + \frac{14}{30} - \frac{15}{30} = \frac{20}{30} = \frac{2}{3} \end{aligned}$$

$$\text{f) } \left(4 - \frac{5}{8}\right) - \left(5 - \frac{3}{4}\right) + \left(3 - \frac{1}{2} - \frac{3}{8}\right) = \frac{27}{8} - \frac{17}{4} + \frac{17}{8} = \frac{44}{8} - \frac{34}{8} = \frac{10}{8} = \frac{5}{4}$$

$$\text{g) } \frac{5}{6} - \left[1 - \left(\frac{1}{4} + \frac{2}{3}\right)\right] = \frac{5}{6} - \left[1 - \frac{11}{12}\right] = \frac{5}{6} - \frac{1}{12} = \frac{9}{12} = \frac{3}{4}$$

$$\text{h) } \left[2 - \left(\frac{1}{2} + \frac{1}{3}\right)\right] - \left[1 + \left(\frac{1}{2} - \frac{1}{3}\right)\right] = \left[2 - \frac{5}{6}\right] - \left[1 + \frac{1}{6}\right] = \frac{7}{6} - \frac{7}{6} = 0$$

$$\begin{aligned} \text{i) } \left[\frac{1}{2} - \left(1 - \frac{1}{3}\right)\right] + \left[\frac{1}{2} - \left(1 - \frac{1}{4}\right)\right] + \left[\frac{1}{2} - \left(1 - \frac{1}{6}\right)\right] &= \left[\frac{1}{2} - \frac{2}{3}\right] + \left[\frac{1}{2} - \frac{3}{4}\right] + \left[\frac{1}{2} - \frac{5}{6}\right] = \\ &= -\frac{1}{6} - \frac{1}{4} - \frac{2}{6} = \frac{-2}{12} + \frac{-3}{12} + \frac{-4}{12} = \frac{-9}{12} = \frac{-3}{4} \end{aligned}$$

18 $\triangle\triangle\triangle$ Calcula y simplifica:

a) $\frac{2}{5} : \frac{2}{3}$

b) $\frac{2}{9} : \frac{-7}{18}$

c) $6 : \frac{3}{5}$

d) $\frac{8}{3} : 4$

e) $\left(-\frac{2}{3}\right) : \frac{5}{9}$

f) $\left(-\frac{1}{4}\right) : \left(-\frac{2}{3}\right)$

a) $\frac{2}{5} : \frac{2}{3} = \frac{2 \cdot 3}{2 \cdot 5} = \frac{3}{5}$

b) $\frac{2}{9} : \frac{-7}{18} = \frac{-2 \cdot 18}{7 \cdot 9} = \frac{-4}{7}$

c) $6 : \frac{3}{5} = \frac{6 \cdot 5}{3} = 10$

d) $\frac{8}{3} : 4 = \frac{8}{3 \cdot 4} = \frac{2}{3}$

e) $\left(-\frac{2}{3}\right) : \frac{5}{9} = \frac{-2 \cdot 9}{3 \cdot 5} = \frac{-6}{5}$

f) $\left(-\frac{1}{4}\right) : \left(-\frac{2}{3}\right) = \frac{3}{4 \cdot 2} = \frac{3}{8}$

19 $\triangle\triangle\triangle$ Calcula y simplifica:

a) $\frac{3}{4} : \left(\frac{1}{2} + \frac{1}{4}\right)$

b) $\left(\frac{3}{5} - \frac{1}{2}\right) : \frac{3}{10}$

c) $\left(\frac{3}{2} + 2\right) \cdot \left(2 - \frac{12}{7}\right)$

d) $\left(\frac{1}{2} + \frac{5}{8}\right) \cdot \left(\frac{1}{3} - \frac{1}{9}\right)$

a) $\frac{3}{4} : \left(\frac{1}{2} + \frac{1}{4}\right) = \frac{3}{4} : \frac{3}{4} = \frac{3 \cdot 4}{3 \cdot 4} = 1$

b) $\left(\frac{3}{5} - \frac{1}{2}\right) : \frac{3}{10} = \frac{1}{10} : \frac{3}{10} = \frac{10}{3 \cdot 10} = \frac{1}{3}$

c) $\left(\frac{3}{2} + 2\right) \cdot \left(2 - \frac{12}{7}\right) = \frac{7}{2} \cdot \frac{2}{7} = 1$

d) $\left(\frac{1}{2} + \frac{5}{8}\right) \cdot \left(\frac{1}{3} - \frac{1}{9}\right) = \frac{9}{8} \cdot \frac{2}{9} = \frac{1}{4}$

20 ▲▲▲ Opera:

a) $\left[4 \cdot \left(1 - \frac{1}{8}\right) - \frac{1}{2}\right] : 3$

b) $\left[\left(\frac{5}{3} - \frac{1}{2}\right) : 7 + \frac{1}{3}\right] \cdot 2$

c) $\left[5 \cdot \left(\frac{3}{10} + \frac{2}{5}\right) - 2\right] : \frac{3}{2}$

d) $\left[7 : \left(1 - \frac{2}{9}\right) - 5\right] : 4$

a) $\left[4 \cdot \left(1 - \frac{1}{8}\right) - \frac{1}{2}\right] : 3 = \left[4 \cdot \frac{7}{8} - \frac{1}{2}\right] : 3 = \left[\frac{7}{2} - \frac{1}{2}\right] : 3 = \frac{6}{2} : 3 = 3 : 3 = 1$

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

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

d) $\left[7 : \left(1 - \frac{2}{9}\right) - 5\right] : 4 = \left[7 : \frac{7}{9} - 5\right] : 4 = [9 - 5] : 4 = 4 : 4 = 1$