

6. Opera y simplifica.

a) $\frac{7}{6} + \frac{7}{12}$

b) $\frac{1}{5} + \frac{3}{10}$

c) $\frac{2}{7} - \frac{11}{14}$

d) $\frac{1}{6} - \frac{1}{14}$

e) $\frac{7}{15} - \frac{3}{10}$

f) $\frac{7}{20} - \frac{4}{15}$

a) $\frac{14}{12} + \frac{7}{12} = \frac{21}{12} = \frac{7}{4}$

b) $\frac{2}{10} + \frac{3}{10} = \frac{5}{10} = \frac{1}{2}$

c) $\frac{4}{14} - \frac{11}{14} = -\frac{7}{14} = -\frac{1}{2}$

d) $\frac{7}{42} - \frac{3}{42} = \frac{4}{42} = \frac{2}{21}$

e) $\frac{14}{30} - \frac{9}{30} = \frac{5}{30} = \frac{1}{6}$

f) $\frac{21}{60} - \frac{16}{60} = \frac{5}{60} = \frac{1}{12}$

7. Calcula, reduciendo al común denominador que se indica.

a) $\frac{1}{2} - \frac{1}{3} + \frac{3}{5} \rightarrow$ Denominador común: 30

b) $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} \rightarrow$ Denominador común: 8

c) $\frac{5}{6} - \frac{3}{9} - \frac{3}{4} \rightarrow$ Denominador común: 36

d) $1 + \frac{1}{2} - \frac{1}{3} \rightarrow$ Denominador común: 6

e) $\frac{7}{9} - \frac{4}{15} - \frac{1}{5} \rightarrow$ Denominador común: 45

a) $\frac{15}{30} - \frac{10}{30} + \frac{18}{30} = \frac{23}{30}$

b) $\frac{4}{8} + \frac{2}{8} + \frac{1}{8} = \frac{7}{8}$

c) $\frac{30}{36} - \frac{12}{36} - \frac{27}{36} = -\frac{9}{36} = -\frac{1}{4}$

d) $\frac{6}{6} + \frac{3}{6} - \frac{2}{6} = \frac{7}{6}$

e) $\frac{35}{45} - \frac{12}{45} - \frac{9}{45} = \frac{14}{45}$

8. Calcula.

a) $\frac{5}{8} - \frac{7}{12} + \frac{1}{4}$

b) $\frac{3}{10} + \frac{4}{5} - \frac{3}{4}$

c) $1 - \frac{6}{7} + \frac{5}{11}$

d) $\frac{9}{5} + \frac{6}{7} - 2$

a) $\frac{15}{24} - \frac{14}{24} + \frac{6}{24} = \frac{7}{24}$

b) $\frac{6}{20} + \frac{16}{20} - \frac{15}{20} = \frac{7}{20}$

c) $\frac{77}{77} - \frac{66}{77} + \frac{35}{77} = \frac{46}{77}$

d) $\frac{63}{35} + \frac{30}{35} - \frac{70}{35} = \frac{23}{35}$

9. Calcula y simplifica los resultados.

a) $\frac{4}{9} + \frac{5}{6} - \frac{7}{18}$

b) $\frac{3}{7} - \frac{2}{5} + \frac{27}{35}$

c) $\frac{5}{6} - \frac{1}{10} - \frac{1}{5}$

d) $\frac{13}{12} - \frac{5}{8} - \frac{5}{6}$

a) $\frac{8}{18} + \frac{15}{18} - \frac{7}{18} = \frac{16}{18} = \frac{8}{9}$

b) $\frac{35}{35} - \frac{14}{35} + \frac{27}{35} = \frac{28}{35} = \frac{4}{5}$

c) $\frac{25}{30} - \frac{3}{10} - \frac{6}{30} = \frac{16}{30} = \frac{8}{15}$

d) $\frac{26}{24} - \frac{15}{24} - \frac{20}{24} = -\frac{9}{24} = -\frac{3}{8}$

10. Opera y simplifica los resultados.

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

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

c) $\frac{3}{5} - \frac{1}{4} - \frac{1}{10}$

d) $\frac{3}{5} - \left(\frac{1}{4} - \frac{1}{10}\right)$

a) $\frac{12 - 4 + 3}{6} = \frac{11}{6}$

b) $2 - \left(\frac{4 + 3}{6}\right) = 2 - \frac{7}{6} = \frac{12 - 7}{6} = \frac{5}{6}$

c) $\frac{12 - 5 - 2}{20} = \frac{5}{20} = \frac{1}{4}$

d) $\frac{3}{5} - \left(\frac{5 - 2}{20}\right) = \frac{3}{5} - \frac{3}{20} = \frac{12 - 3}{20} = \frac{9}{20}$

11. Quita paréntesis y calcula.

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

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

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

d) $\left(1 - \frac{1}{7}\right) - \left(\frac{9}{14} - \frac{1}{2}\right)$

a) $1 - \frac{1}{4} - \frac{2}{3} = \frac{12 - 3 - 8}{12} = \frac{1}{12}$

b) $\frac{3}{5} + \frac{1}{6} - \frac{2}{3} = \frac{18 + 5 - 20}{30} = \frac{3}{30} = \frac{1}{10}$

c) $\frac{15 + 10 - 6 - 5}{30} = \frac{14}{30} = \frac{7}{15}$

d) $\frac{14 - 2 - 9 + 7}{14} = \frac{10}{14} = \frac{5}{7}$

12. Resuelve de dos formas:

— Quitando, primero, los paréntesis.

— Operando, primero, dentro de cada paréntesis.

a) $\left(1 - \frac{1}{4}\right) - \left(1 - \frac{5}{9}\right) - \left(1 - \frac{5}{6}\right)$

b) $\left(1 - \frac{2}{3}\right) - \left(\frac{4}{5} - \frac{1}{3}\right) + \left(\frac{1}{5} - \frac{7}{15}\right)$

a) $1 - \frac{1}{4} - 1 + \frac{5}{9} - 1 + \frac{5}{6} = \frac{36 - 9 - 36 + 20 - 36 + 30}{36} = \frac{5}{36}$

$\frac{4 - 1}{4} - \frac{9 - 5}{9} - \frac{6 - 5}{6} = \frac{3}{4} - \frac{4}{9} - \frac{1}{6} = \frac{27 - 16 - 6}{36} = \frac{5}{36}$

b) $1 - \frac{2}{3} - \frac{4}{5} + \frac{1}{3} + \frac{1}{5} - \frac{7}{15} = \frac{15 - 10 - 12 + 5 + 3 - 7}{15} = -\frac{6}{15} = -\frac{2}{5}$

$\frac{3 - 2}{3} - \frac{12 - 5}{15} + \frac{3 - 7}{15} = \frac{1}{3} - \frac{7}{15} + \frac{-4}{15} = \frac{5 - 7 - 4}{15} = -\frac{6}{15} = -\frac{2}{5}$

13. Calcula.

a) $\frac{7}{12} - \left[1 - \left(\frac{2}{3} - \frac{3}{4}\right)\right]$

b) $\left(\frac{2}{3} - \frac{1}{5}\right) - \left[\frac{7}{12} - \left(\frac{1}{3} + \frac{1}{5}\right)\right]$

c) $\left[1 - \left(\frac{2}{3} + \frac{3}{4}\right)\right] - \left[\frac{5}{12} - \left(\frac{1}{3} - \frac{1}{8}\right)\right]$

d) $\left[\frac{2}{5} - \left(1 - \frac{1}{8}\right)\right] + \left[\frac{3}{4} - \left(\frac{2}{5} - \frac{3}{10}\right)\right]$

e) $\left[\left(\frac{5}{3} - 1\right) + \left(\frac{2}{5} - \frac{1}{3}\right)\right] - \left[\left(2 - \frac{7}{6}\right) - \left(\frac{3}{4} - \frac{1}{3}\right)\right]$

a) $\frac{7}{12} - \left[1 - \frac{8 - 9}{12}\right] = \frac{7}{12} - \left[1 + \frac{1}{12}\right] = \frac{7 - 12 - 1}{12} = -\frac{6}{12} = -\frac{1}{2}$

b) $\frac{10 - 3}{15} - \left[\frac{7}{12} - \frac{5 + 3}{15}\right] = \frac{7}{15} - \left[\frac{7}{12} - \frac{8}{15}\right] = \frac{7}{15} - \frac{7}{12} + \frac{8}{15} = \frac{15}{15} - \frac{7}{12} = 1 - \frac{7}{12} = \frac{5}{12}$

c) $\left[1 - \frac{17}{12}\right] - \left[\frac{5}{12} - \frac{5}{24}\right] = \frac{12 - 17}{12} - \frac{10 - 5}{24} = \frac{-5}{12} - \frac{5}{24} = \frac{-10 - 5}{24} = -\frac{15}{24} = -\frac{5}{8}$

d) $\left[\frac{2}{5} - \frac{8 - 1}{8}\right] + \left[\frac{3}{4} - \frac{4 - 3}{10}\right] = \frac{2}{5} - \frac{7}{8} + \frac{3}{4} - \frac{1}{10} = \frac{16 - 35 + 30 - 4}{40} = \frac{7}{40}$

e) $\left[\frac{2}{3} + \frac{1}{15}\right] - \left[\frac{5}{6} - \frac{5}{12}\right] = \frac{10 + 1}{15} - \frac{10 - 5}{12} = \frac{11}{15} - \frac{5}{12} = \frac{44 - 25}{60} = \frac{19}{60}$