

A. SUMAS Y RESTAS

$$1) \quad 1 + \frac{1}{2} =$$

$$2) \quad \frac{3}{5} - 6 =$$

$$3) \quad \frac{4}{6} - 7 =$$

$$4) \quad \frac{1}{4} - \frac{3}{14} =$$

$$5) \quad \frac{1}{2} + \frac{2}{3} - \frac{1}{6} =$$

$$6) \quad \frac{1}{2} - 3 + \frac{5}{3} =$$

$$7) \quad 1 + \frac{1}{2} + \frac{1}{6} =$$

$$8) \quad \frac{60}{20} + \frac{1}{10} - \frac{2}{30} =$$

$$9) \quad \frac{3}{20} + \frac{1}{25} - \frac{11}{60} =$$

$$10) \quad \frac{14}{15} - \frac{1}{45} + 3 - \frac{2}{75} =$$

$$11) \quad \frac{1}{2} - \left(\frac{3}{5} - 1 \right) =$$

$$12) \quad -\frac{5}{4} - \left(\frac{3}{8} + \frac{1}{2} - 1 \right) =$$

$$13) \quad -\frac{5}{4} - \left(-3 - \frac{1}{6} - 1 \right) + \frac{2}{7} =$$

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

$$15) \quad \frac{4}{2} - \left(-\frac{7}{14} + \frac{12}{3} - 2 \right) - \frac{10}{30} + 1 + \frac{30}{2} =$$

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

$$17) \quad \frac{7}{2} - \left[-\frac{7}{4} - \left(1 + \frac{1}{2} \right) + (-2) \right] - \frac{1}{3} + \frac{4}{2} - \left(-\frac{2}{3} - 2 \right) =$$

B. PRODUCTOS Y DIVISIONES

$$18) \quad \frac{1}{2} \cdot \frac{3}{5} =$$

$$19) \quad \frac{1}{2} \cdot \frac{5}{4} =$$

$$20) \quad \frac{(-1)}{2} \cdot \frac{3}{5} =$$

$$21) \frac{2}{3} \cdot \frac{(-5)}{7} \cdot \frac{9}{5} =$$

$$22) \frac{1}{2} \cdot \frac{(-2)}{3} \cdot \frac{3}{5} =$$

$$23) \frac{1}{2} : \frac{2}{3} =$$

$$24) \frac{6}{7} : \frac{(-2)}{3} =$$

C. MIXTOS

$$25) \frac{2}{5} \cdot \frac{3}{2} + \frac{5}{2} : \frac{7}{2} =$$

$$26) \frac{3}{2} : \frac{1}{2} + \frac{3}{2} \cdot \frac{1}{2} =$$

$$27) \frac{12}{5} \cdot \frac{(-3)}{2} - \frac{5}{(-2)} : \frac{(-7)}{2} =$$

$$28) \frac{1}{2} \left\{ \left(\frac{2}{3} + 1 \right) - \frac{1}{2} \right\} =$$

$$29) \frac{1}{2} : \left\{ \left(\frac{2}{3} + 1 \right) - \frac{1}{2} : \frac{(-2)}{3} \right\} =$$

$$30) \frac{1}{2} \cdot \left(\frac{2}{7} - \frac{1}{14} - 2 \right) =$$

$$31) \frac{1}{2} : \left(1 - \frac{1}{5} - \frac{2}{25} \right) - 1 =$$

FRACCIONES RESUELTAS

A. SUMAS Y RESTAS

$$1) \quad 1 + \frac{1}{2} = \frac{1 \cdot 2}{2} + \frac{1 \cdot 1}{2} = \frac{2+1}{2} = \frac{3}{2}$$

$$2) \quad \frac{3}{5} - 6 = \frac{3 \cdot 1}{5} - \frac{5 \cdot 6}{5} = \frac{3-30}{5} = -\frac{27}{5}$$

$$3) \quad \frac{4}{6} - 7 = \frac{4 \cdot 1}{6} - \frac{7 \cdot 6}{6} = \frac{4-42}{6} = \frac{4 \cdot 1 - 7 \cdot 6}{6} = -\frac{38}{6} = -\frac{19}{3}$$

$$4) \quad \frac{1}{4} - \frac{3}{14} = \frac{1 \cdot 7}{28} - \frac{3 \cdot 2}{28} = \frac{7-6}{28} = \frac{1}{28}$$

$$5) \quad \frac{1}{2} + \frac{2}{3} - \frac{1}{6} = \frac{1 \cdot 3}{6} + \frac{2 \cdot 2}{6} - \frac{1 \cdot 1}{6} = \frac{3+4-1}{6} = \frac{6}{6} = 1$$

$$6) \quad \frac{1}{2} - 3 + \frac{5}{3} = \frac{1 \cdot 3}{6} - \frac{3 \cdot 6}{6} + \frac{5 \cdot 2}{6} = \frac{3-18+10}{6} = -\frac{5}{6}$$

$$7) \quad 1 + \frac{1}{2} + \frac{1}{6} = \frac{1 \cdot 6}{6} + \frac{1 \cdot 3}{6} + \frac{1 \cdot 1}{6} = \frac{6+3+1}{6} = \frac{10}{6} = \frac{5}{3}$$

$$8) \quad \frac{60}{20} + \frac{1}{10} - \frac{2}{30} = 3 + \frac{1}{10} - \frac{1}{15} = \frac{3 \cdot 30}{30} + \frac{1 \cdot 3}{30} - \frac{1 \cdot 2}{30} = \frac{90}{30} + \frac{3}{30} - \frac{2}{30} =$$
$$\frac{90+3-2}{30} = \frac{91}{30}$$

$$9) \quad \frac{3}{20} + \frac{1}{25} - \frac{11}{60} = \frac{3 \cdot 15}{300} + \frac{1 \cdot 12}{300} - \frac{11 \cdot 5}{300} = \frac{45+12-55}{300} = \frac{2}{300} = \frac{1}{150}$$

$$10) \quad \frac{14}{15} - \frac{1}{45} + 3 - \frac{2}{75} = \frac{14 \cdot 15}{225} - \frac{1 \cdot 5}{225} + \frac{3 \cdot 225}{225} - \frac{2 \cdot 3}{225} = \frac{14 \cdot 15 - 5 + 3 \cdot 225 - 2 \cdot 3}{225} =$$
$$= \frac{210 - 5 + 675 - 6}{225} = \frac{874}{225}$$

$$11) \quad \frac{1}{2} - \left(\frac{3}{5} - 1 \right) = \frac{1}{2} + \frac{2}{5} = \frac{1}{2} - \left(\frac{3 \cdot 1}{5} - \frac{1 \cdot 5}{5} \right) = \frac{1}{2} - \left(\frac{3-5}{5} \right) = \frac{1}{2} - \left(\frac{-2}{5} \right) =$$

$$= \frac{1}{2} + \frac{2}{5} = \frac{5}{10} + \frac{4}{10} = \frac{9}{10}$$

$$12) \quad -\frac{5}{4} - \left(\frac{3}{8} + \frac{1}{2} - 1 \right) = -\frac{5}{4} + \frac{1}{8} = \frac{-10+1}{8} = -\frac{9}{8}$$

$$13) \quad -\frac{5}{4} - \left(-3 - \frac{1}{6} - 1 \right) + \frac{2}{7} = -\frac{5}{4} - \left(\frac{-18-1-6}{6} \right) + \frac{2}{7} = -\frac{5}{4} + \frac{25}{6} + \frac{2}{7} = \\ = \frac{-21+14+12}{84} = \frac{5}{84}$$

$$14) \quad \frac{3}{2} - \left(-\frac{3}{4} + \frac{2}{3} - 2 \right) - \frac{1}{3} = \frac{3}{2} - \left(\frac{-25}{12} \right) - \frac{1}{3} = \frac{3}{2} + \frac{25}{12} - \frac{1}{3} = \frac{39}{12} = \frac{13}{4}$$

$$15) \quad \frac{4}{2} - \left(-\frac{7}{14} + \frac{12}{3} - 2 \right) - \frac{10}{30} + 1 + \frac{30}{2} = 2 - \left(-\frac{1}{2} + 4 - 2 \right) - \frac{1}{3} + 1 + 15 = \\ = 18 - \frac{3}{2} - \frac{1}{3} = \frac{97}{6}$$

$$16) \quad \frac{1}{2} - \left\{ \left(\frac{3}{5} - 1 \right) + \frac{3}{2} \right\} = \frac{1}{2} - \left\{ \frac{-2}{5} + \frac{3}{2} \right\} = \frac{1}{2} - \frac{11}{10} = \frac{5-22}{10} = -\frac{17}{10}$$

$$17) \quad \frac{7}{2} - \left[-\frac{7}{4} - \left(1 + \frac{1}{2} \right) + (-2) \right] - \frac{1}{3} + \frac{4}{2} - \left(-\frac{2}{3} - 2 \right) = \\ = \frac{7}{2} - \left[-\frac{7}{4} - \frac{3}{2} - 2 \right] - \frac{1}{3} + \frac{4}{2} + \frac{8}{3} = \frac{11}{2} + \frac{21}{4} + \frac{7}{3} = \frac{66+63+28}{12} = \frac{157}{12}$$

B. PRODUCTOS Y DIVISIONES

$$18) \quad \frac{1}{2} \cdot \frac{3}{5} = \frac{3}{10}$$

$$19) \quad \frac{1}{2} \cdot \frac{5}{4} = \frac{5}{8}$$

$$20) \quad \frac{(-1)}{2} \cdot \frac{3}{5} = -\frac{3}{10}$$

$$21) \quad \frac{2}{3} \cdot \frac{(-5)}{7} \cdot \frac{9}{5} = -\frac{2 \cdot 3}{7} = -\frac{6}{7}$$

$$22) \quad \frac{1}{2} \cdot \frac{(-2)}{3} \cdot \frac{3}{5} = -\frac{1}{5}$$

$$23) \quad \frac{1}{2} : \frac{2}{3} = \frac{3}{4}$$

$$24) \quad \frac{6}{7} : \frac{(-2)}{3} = -\frac{18}{14} = -\frac{9}{7}$$

C. MIXTOS

$$25) \quad \frac{2}{5} \cdot \frac{3}{2} + \frac{5}{2} : \frac{7}{2} = \frac{3}{5} + \frac{5}{7} = \frac{46}{35}$$

$$26) \quad \frac{3}{2} : \frac{1}{2} + \frac{3}{2} \cdot \frac{1}{2} = \frac{3 \cdot 2}{2 \cdot 1} + \frac{3 \cdot 1}{2 \cdot 2} = \frac{6}{2} + \frac{3}{4} = 3 + \frac{3}{4} = \frac{12+3}{4} = \frac{15}{4}$$

$$27) \quad \frac{12}{5} \cdot \frac{(-3)}{2} - \frac{5}{(-2)} : \frac{(-7)}{2} = -\frac{18}{5} - \frac{5}{7} = -\frac{151}{35}$$

$$28) \quad \frac{1}{2} \left\{ \left(\frac{2}{3} + 1 \right) - \frac{1}{2} \right\} = \frac{1}{2} \left\{ \frac{5}{3} - \frac{1}{2} \right\} = \frac{1}{2} \cdot \frac{7}{6} = \frac{7}{12}$$

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

$$30) \quad \frac{1}{2} \cdot \left(\frac{2}{7} - \frac{1}{14} - 2 \right) = \frac{1}{2} \cdot \left(-\frac{25}{14} \right) = -\frac{25}{28}$$

$$31) \quad \frac{1}{2} : \left(1 - \frac{1}{5} - \frac{2}{25} \right) - 1 = \frac{1}{2} : \frac{18}{25} - 1 = \frac{25}{36} - 1 = -\frac{11}{36}$$