

FRACTIONS

1- $\frac{4}{2} = 2$; $\frac{12}{3} = 4$; $\frac{8}{4} = 2$; $\frac{20}{5} = 4$; $\frac{39}{13} = 3$

2- a) $\frac{7}{10}$ de 70 = 49 b) $\frac{3}{4}$ de 240 = 180 c) $\frac{5}{9}$ de 72 = 40 d) $\frac{2}{3}$ de 39 = 26
e) $\frac{4}{5}$ de 450 = 360 f) $\frac{6}{13}$ de 52 = 24

3- $\frac{7}{9} + \frac{2}{9} = 1$; $\frac{10}{23} + \frac{13}{23} = 1$; $\frac{8}{19} + \frac{11}{19} = 1$; $\frac{35}{51} + \frac{16}{51} = 1$; $\frac{21}{26} + \frac{5}{26} = 1$; $\frac{13}{20} + \frac{7}{20} = 1$

4- $(16:4) \cdot 3 = 12 \Rightarrow (12:3) \cdot 4 = 16$

5- a) $\frac{126}{54} = \frac{21}{9} = \frac{7}{3}$ b) $\frac{72}{450} = \frac{8}{50} = \frac{4}{25}$ c) $\frac{288}{504} = \frac{16}{28} = \frac{4}{7}$ d) $\frac{44}{52} = \frac{22}{26} = \frac{11}{13}$ e) $\frac{200}{125} = \frac{8}{5}$

6- $\frac{4}{3} = \frac{160}{120}$; $\frac{3}{5} = \frac{72}{120}$; $\frac{7}{8} = \frac{105}{120}$; $\frac{1}{6} = \frac{20}{120}$; $\frac{11}{15} = \frac{88}{120}$; $\frac{9}{4} = \frac{270}{120}$; $\frac{5}{12} = \frac{50}{120}$

7- a) $\frac{8}{15} - \frac{7}{5} + \frac{9}{10} = \frac{16}{30} - \frac{42}{30} + \frac{27}{30} = \frac{27}{30} - \frac{26}{30} = \frac{1}{30}$

b) $\frac{2}{3} + \frac{11}{27} + \frac{5}{81} + \frac{7}{9} = \frac{54}{81} + \frac{33}{81} + \frac{5}{81} + \frac{63}{81} = \frac{155}{81}$

c) $\frac{2}{3} + \frac{3}{2} - 1 + \frac{1}{4} = \frac{8}{12} + \frac{18}{12} - \frac{12}{12} + \frac{4}{12} = \frac{26}{12} - \frac{16}{12} = \frac{10}{12} = \frac{5}{6}$

d) $3 - \frac{1}{2} \cdot \frac{4}{3} = 3 - \frac{4}{6} = \frac{18}{6} - \frac{4}{6} = \frac{14}{6} = \frac{7}{3}$

e) $\frac{2}{3} + \frac{1}{2} : \frac{3}{4} = \frac{2}{3} + \frac{4}{6} = \frac{4}{6} + \frac{4}{6} = \frac{8}{6} = \frac{4}{3}$

f) $\frac{21}{16} : \left(\frac{9}{8} - \frac{1}{54} \right) = \frac{21}{16} : \left(\frac{243}{216} - \frac{4}{216} \right) = \frac{21}{16} : \frac{239}{216} = \frac{4536}{3824} = \frac{567}{478}$

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$$\text{a) } \left(\frac{3}{5} + \frac{3}{2}\right) \cdot \frac{1}{4} - \frac{2}{5} = \left(\frac{6}{10} + \frac{15}{10}\right) \cdot \frac{1}{4} - \frac{2}{5} = \frac{21}{10} \cdot \frac{1}{4} - \frac{2}{5} = \frac{21}{40} - \frac{16}{40} = \frac{5}{40} = \frac{1}{8}$$

$$\text{b) } \frac{2}{3} \cdot \frac{15}{4} - \left(\frac{1}{3} + \frac{2}{5} : \frac{3}{10}\right) = \frac{30}{12} - \left(\frac{1}{3} + \frac{20}{15}\right) = \frac{30}{12} - \frac{5}{3} = \frac{30}{12} - \frac{20}{12} = \frac{10}{12} = \frac{5}{6}$$

$$\text{c) } \frac{4}{7} + \frac{3}{2} : \frac{5}{12} - \frac{2}{7} \cdot \frac{3}{4} = \frac{4}{7} + \frac{36}{10} - \frac{6}{21} = \frac{120}{210} + \frac{756}{210} - \frac{60}{210} = \frac{816}{210} = \frac{136}{35}$$

$$\begin{aligned} \text{d) } \left(\frac{2}{5} - \frac{3}{10}\right) \cdot \left(\frac{2}{3} + 3 - \frac{11}{5}\right) : \frac{4}{9} &= \left(\frac{4}{10} - \frac{3}{10}\right) \cdot \left(\frac{10}{15} + \frac{45}{15} - \frac{33}{15}\right) : \frac{4}{9} = \\ &= \frac{1}{10} \cdot \frac{22}{15} : \frac{4}{9} = \frac{22}{150} : \frac{4}{9} = \frac{198}{600} = \frac{33}{100} \end{aligned}$$