

Ejercicios

4.8.1) a) $4 \frac{7}{8} - 1 \frac{3}{4} = 3 + \frac{7}{8} - \frac{6}{8} = 3 + \frac{1}{8} = \boxed{3 \frac{1}{8}}$

(b) $3 \frac{1}{3} - 7 \frac{2}{9} = 3 + \frac{1}{3} - 7 - \frac{2}{9}$
 $= -4 + \frac{3}{9} - \frac{2}{9} = -4 + \frac{1}{9}$
 $= -3 - \frac{8}{9} = \boxed{-\left(3 \frac{8}{9}\right)}$

(c) $19 \frac{3}{20} - 9 \frac{13}{15} = 10 + \frac{9}{60} - \frac{52}{60}$
 $= 10 - \frac{43}{60}$
 $= 9 + \frac{17}{60} = \boxed{9 \frac{17}{60}}$

(d) $18 - \left(6 \frac{1}{2} + 5 \frac{1}{3}\right) = 18 - \left(11 + \frac{3}{6} + \frac{2}{6}\right)$
 $= 18 - \left(11 + \frac{5}{6}\right)$
 $= 7 - \frac{5}{6}$
 $= \boxed{6 \frac{1}{6}}$

(e) $5 \frac{5}{12} \cdot 24 = \left(5 + \frac{5}{12}\right) \cdot 24 = 120 + 10 = \boxed{130}$

(f) $1 \frac{1}{2} \cdot \left(6 \frac{2}{3} - 4 \frac{4}{9}\right) = \frac{3}{2} \cdot \left(2 + \frac{6}{9} - \frac{4}{9}\right)$
 $\frac{3}{2} \left(2 + \frac{2}{9}\right) = 3 + \frac{1}{3}$
 $= \boxed{3 \frac{1}{3}}$

$$\begin{aligned}
 (g) \quad 5 \frac{1}{3} + 2 \frac{1}{3} \div 3 \frac{1}{2} &= 5 \frac{1}{3} + \left(2 + \frac{1}{3} \right) \div \left(7/2 \right) \\
 &= 5 \frac{1}{3} + \left(\frac{7}{3} \cdot \frac{2}{7} \right) \\
 &= 5 \frac{1}{3} + \frac{2}{3} = 5 + \frac{3}{3} = \boxed{6}
 \end{aligned}$$

$$\begin{aligned}
 (h) \quad 3 \frac{2}{3} \div \left(-6 \frac{7}{8} \right) \\
 \frac{11}{3} \div \left(-\frac{48}{8} - \frac{7}{8} \right) &= \frac{11}{3} \div \left(-\frac{55}{8} \right) \\
 &= \frac{11}{3} \cdot -\left(\frac{8}{55} \right) = \boxed{-\frac{8}{15}}
 \end{aligned}$$

$$\begin{aligned}
 4.8.2) \quad 2 \frac{1}{2} + 3 \frac{1}{3} + 4 \frac{1}{4} + 5 \frac{1}{5} + 6 \frac{1}{6} \\
 &= 20 + \left(\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} \right) \\
 &= 20 + \left(\frac{3}{6} + \frac{2}{6} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} \right) \\
 &= 20 + \left(1 + \frac{1}{4} + \frac{1}{5} \right) \\
 &= 21 + \frac{1}{4} + \frac{1}{5} = \boxed{21}
 \end{aligned}$$

$$\begin{aligned}
 4.8.3) \quad (7a^2 - 11a + 3)(3a - 4) \quad a = 1 \frac{1}{3} = \frac{4}{3} \\
 \left(7 \left(\frac{16}{9} \right) - 11 \left(\frac{4}{3} \right) + 3 \right) (4 - 4) = (\dots)(0) = \boxed{0}
 \end{aligned}$$

$$\begin{aligned}
 4.8.4) \quad 136 \frac{3}{4} - 131 \frac{7}{8} &= 5 + \frac{3}{4} - \frac{7}{8} \\
 &= 5 + \frac{6}{8} - \frac{7}{8} = 5 - \frac{1}{8} = \boxed{4 \frac{7}{8}}
 \end{aligned}$$

4.8.5)

$$3\left(2\frac{1}{2}\right) + 3\left(3\frac{1}{3}\right) = 6 + \frac{3}{2} + 9 + 1 \\ = 16 + \frac{3}{2} = \boxed{17\frac{1}{2}}$$

4.8.6)

$$60 - 6\frac{1}{2} = 54 - \frac{1}{2} = \left(53 + \frac{1}{2}\right) \cdot \frac{1}{60} \\ = \frac{53}{60} + \frac{1}{120} = \frac{106}{120} + \frac{1}{120} \\ = \boxed{\frac{107}{120}}$$