Importante. $a \div b = a \cdot \frac{1}{b}$.

Si b es una fracción, multiplicamos por el recíproco de la fracción.

Idea. El recíproco de $\frac{a}{b}$ es $\frac{b}{a}$. (se invierte).

Problemas (personal)

4.16) $\frac{3}{7} \div 2 = \frac{3}{7} \cdot \frac{1}{2} = \boxed{\frac{3}{14}}$

4.17)

(a) $\frac{2}{3} \cdots \left(\frac{2}{3}\right)^{-1} = \boxed{\frac{3}{2}}$

(b) $\boxed{\frac{b}{a}}$

4.18) $3 \div \frac{5}{8} = 3 \cdot \frac{8}{5} = \boxed{\frac{24}{5}}$

4.19) $\frac{2}{7} \div \frac{9}{5} = \frac{2}{7} \cdot \frac{5}{9} = \boxed{\frac{10}{63}}$

4.20) $\dfrac{14/3}{-2/9} = \frac{14}{3} \div -\frac{2}{9} = \frac{\overset{7}{\cancel{14}}}{\underset{1}{\cancel{3}}} \cdot -\left(\frac{\overset{3}{\cancel{9}}}{\underset{1}{\cancel{2}}}\right)$

$= \boxed{-21}$

4.21)

$$\frac{2}{5} \cdot ? = 32$$

$$32 = 2^5$$

$$? \rightarrow 2^4 \cdot 5$$

$$\frac{2}{\cancel{8}} \cdot 2^4 \cdot \cancel{5}^1 = 2^5$$

$$2^4 \cdot 5 = \boxed{80}$$

4.22)

$$\frac{20}{3} \cdot x = 60$$

$$x = 3 \cdot 3 = \boxed{9}$$

Ejercicios

4.3.1) (a) $\frac{3}{5} \div 2 = \frac{3}{5} \cdot \frac{1}{2} = \boxed{\frac{3}{10}}$

(b) $7 \div \frac{7}{8} = 7 \cdot \frac{8}{7} = \boxed{8}$

(c) $\frac{14/3}{5/4} = \frac{14}{3} \div \frac{5}{4} = \frac{14}{3} \cdot \frac{4}{5} = \boxed{\frac{56}{15}}$

(d) $\left(-\frac{5}{6}\right) \div \left(-\frac{12}{7}\right) = \frac{5}{6} \cdot \frac{7}{12} = \boxed{\frac{35}{72}}$

4.3.2)

$$\frac{3}{7} \div \frac{7}{3} = \frac{3}{7} \cdot \frac{3}{7} = \boxed{\frac{9}{49}}$$

4.3.3) $\quad x = \dfrac{3}{4}$ $\qquad 36 \div \dfrac{3}{4} = \overset{12}{\cancel{36}} \cdot \dfrac{4}{\underset{1}{\cancel{3}}} = \boxed{48}$

4.3.4)

(a) $\quad \dfrac{2}{3} \cdot x = 40$

$\qquad x = 3 \cdot 20$

$\qquad x = \boxed{60}$

(b) $\quad \dfrac{9}{5} = \dfrac{2}{3} \cdot x$

$\qquad x = \dfrac{27}{2 \cdot 5} = \boxed{\dfrac{27}{10}}$

4.3.5)

(a) $\quad \dfrac{6}{7} \div x = \dfrac{3}{7}$

$\qquad \dfrac{6}{7} \cdot \dfrac{a}{b} = \dfrac{3}{7} \qquad\qquad \dfrac{a}{b} = \dfrac{1}{2}$

$\qquad\qquad\qquad\qquad\qquad\qquad x = \boxed{2}$

(b) $\quad \dfrac{6}{7} \div x = \dfrac{6}{5}$

$\qquad \dfrac{6}{7} \cdot \dfrac{a}{b} = \dfrac{6}{5} \qquad\qquad \dfrac{a}{b} = \dfrac{7}{5} \qquad x = \boxed{\dfrac{5}{7}}$

(c) $\quad \dfrac{6}{7} \div x = \dfrac{2}{3} \qquad\qquad \dfrac{6}{7} \cdot \dfrac{a}{b} = \dfrac{2}{3} \qquad \dfrac{a}{b} = \dfrac{7}{3 \cdot 3} = \dfrac{7}{9}$

$\qquad x = \boxed{\dfrac{9}{7}}$

4.3.6)

$$x \div \frac{3}{5} = 20$$

$$x \cdot \frac{5}{3} = 20 \qquad x = \frac{3 \cdot \overset{4}{20}}{\underset{1}{5}} = \boxed{12}$$

4.3.7)

$$\left(x \cdot \frac{3}{4}\right) \div \frac{3}{5} = x \cdot \frac{\overset{1}{3}}{4} \cdot \frac{5}{\underset{1}{3}}$$

$$= x \cdot \boxed{\frac{5}{4}}$$

4.3.8)

$$\frac{2}{3} \cdot x = 6$$

$$x = 3 \cdot 3$$

$$x = \boxed{9}$$