Los números que no son enteros tienen dos formas de representarse:

- Fracciones
- Decimales.

Problemas (Personal)

6.10) 0.2.

$$0.2 = 2 \times 10^{-1} = 2 \times \frac{1}{10} = \frac{2}{10} = \frac{1}{5}$$

6.11)

(a) $0.8 = \frac{8}{10} = \frac{4}{5}$ (b) $0.5 = \frac{1}{2}$ (c) $0.04 = \frac{4}{100} = \frac{1}{25}$

(d) $0.125 = \frac{125}{1000} = \frac{1}{8}$ (e) $-1.72 = -\frac{172}{100} = -\frac{43}{25}$

(f) $2.5625 = \frac{25625}{10000} = \frac{5125}{2000} = \frac{1025}{400} = \frac{41}{16}$

$0.875 = \frac{875}{1000} = \frac{35}{40} = \frac{7}{8}$

6.12)

(a) $\frac{1}{2} = 0.5$ (d) $\frac{7}{8} = 0.875$

(b) $\frac{3}{5} = \frac{6}{10} = 0.6$

(c) $\frac{29}{100} = 0.29$

(e) $-\frac{11}{20} = -\frac{55}{100} = -0.55$

(f) $\frac{19}{32} = \frac{19}{2^5} = \frac{19 \cdot 5^5}{2^5 \cdot 5^5}$

$= \frac{19 \cdot 5^5}{10^5} = \frac{3125 \cdot 19}{100,000} = \frac{59375}{100,000} = 0.59375$

Importante: $\frac{1}{2} = 0.5$ $\frac{1}{4} = 0.25$ $\frac{1}{6} = 0.1\overline{6}$ $\frac{1}{3} = 0.\overline{3}$ $\frac{1}{5} = 0.2$ $\frac{1}{7} = 0.\overline{142857}$ $\frac{1}{8} = 0.125$ $\frac{1}{9} = 0.\overline{1}$ $\frac{1}{10} = 0.1$

6.13) $12.3456 = \frac{123456}{10,000} = \frac{15432}{1250} = \frac{7716}{625}$ $\frac{7716}{625}$

$$\begin{array}{r} 3 \\ 25 \\ \times\ 17 \\ \hline 175 \\ 25 \\ \hline 425 \end{array}$$

6.14) $2.5 = \frac{5}{2}$. El recíproco es $\frac{2}{5}$, o 0.4.

Ejercicios

6.3.1) (a) $\frac{2}{25} = \frac{8}{100} = 0.08$

(b) $\frac{5}{16} = \frac{5 \cdot 5^4}{2^4 \cdot 5^4} = \frac{3125}{10^4} = 0.3125$

(c) $-\frac{11}{4} = -\frac{11 \cdot 5^2}{2^2 \cdot 5^2} = \frac{275}{10^2} = -2.75$

(d) $\frac{81}{1000} = 0.081$

(e) $\frac{17}{40} = \frac{17}{10 \cdot 4} = \frac{17}{2 \cdot 5 \cdot 2^2} = \frac{17}{2^3 \cdot 5} \cdot \frac{5^2}{5^2} = \frac{425}{10^3} = 0.425$

(F) $\frac{3}{10^4} = 0.0003$

6.3.2) $\frac{2}{10} + \frac{4}{100} + \frac{6}{1000} = \frac{200}{1000} + \frac{40}{1000} + \frac{6}{1000} = \frac{246}{1000} = 0.246$

6.3.3) (a) $-0.7 = -\frac{7}{10}$ (b) $0.0138 = \frac{138}{10,000} = \frac{69}{5,000}$ $\frac{69}{5,000}$

(c) $0.375 = \frac{375}{1000} = \frac{15}{40} = \frac{3}{8}$ (d) $1.11 = \frac{111}{100}$ $\frac{111}{100}$

(e) $0.002 = \frac{2}{1000} = \frac{1}{500}$ $\frac{1}{500}$ (F) $2.6 = \frac{26}{10} = \frac{13}{5}$ $\frac{13}{5}$

6.3.4) $8 \times .25 \times 2 \times .125 = 8 \times \frac{1}{4} \times 2 \times \frac{1}{8} = \frac{1}{2}$

6.3.5) $3.2 = \frac{32}{10} = \frac{16}{5}$, el recíproco es $\frac{5}{16}$.

6.3.6) $5.75 = \frac{575}{100} = \frac{23}{4}$ $\frac{1}{8} \times m = \frac{23}{4}$

$m = \frac{23}{\cancel{4}_1} \times \frac{\overset{2}{\cancel{8}}}{1} = 46$

6.3.7) $3 \cdot \left(\frac{2}{3}\right)^n$ n es el número de rebotes.

$3 \cdot \left(\frac{2}{3}\right)^n < \frac{1}{2}$ en el quinto (5) rebote.

$\frac{2^n}{3^{n-1}} < \frac{1}{2}$ $\frac{32}{81} < \frac{1}{2}$

6.3.8) $x \div y = 1.0625$ $x < 50$ $y < 50$ $x > y$

$1.0625 = \frac{10625}{10,000} = \frac{425}{400} = \frac{17}{16}$ $\frac{x}{y} = \frac{17}{16}$ $\frac{17}{16}$ o $\frac{34}{32}$

$17 + 16 + 34 + 32 = 99$