6.21) De menor a mayor:

$$0.907 < 0.9089 < 0.97 < 0.9709 < 0.979$$

6.22)

(a) $8.97 + 0.254$

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 8.970 \\ +\ 0.254 \\ \hline 9.224 \end{array}$$

(b) $0.27 - 1.006 = -(1.006 - 0.27)$

$$\begin{array}{r} {\scriptstyle 0\ 9\ 1} \\ 1.006 \\ -\ 0.270 \\ \hline 0.736 \end{array}$$

-0.736

(c) $0.902 \cdot 10000 = 0.902 \times 10^4 = 9020$

(d) $25.5 \div 0.05 = 255 \times 10^{-1} \div 5 \times 10^{-2}$

$$= 255 \times \frac{1}{10} \times \frac{1}{5} \times 100^{2}$$

$$= 510$$

(e) $0.025 \cdot 0.042 = 25 \times 10^{-3} \times 42 \times 10^{-3}$

$$= 25 \times 42 \times \frac{1}{10^3} \times \frac{1}{10^3} = 1050 \times 10^{-6}$$

$$= 0.001050$$

(f) $(0.11)^3 = \left(\frac{11}{100}\right)^3 = \frac{1331}{10^6} = 0.001331$

6.23) $100 \times 33.67 \times 3.367 \times 1000 = (a)^2$, con $a > 0$.

$$3367 \times 3367 = (3367)^2$$

3367

6.24) $\frac{6}{.3} + \frac{.3}{.06} = \frac{6}{3/10} + \frac{3/10}{6/100} = \frac{\overset{2}{6} \cdot 10}{\underset{1}{3}} + \frac{\overset{1}{3} \cdot 100}{\underset{2}{6} \cdot 10}$

$$= 20 + 5 = 25$$

6.25) $3.5 - \frac{1}{3.5} = \frac{35}{10} - \frac{10}{35} = \frac{245}{70} - \frac{20}{70} = \frac{225}{70}$

$$= \frac{45}{14}$$

6.26) $\frac{(.2)^3}{(.02)^2} = \frac{(1/5)^3}{(1/50)^2} = \frac{1^3/5^3}{1^2/50^2} = \frac{50^2}{5^3} = \frac{5^2 \cdot 2^2 \cdot 5^{\cancel{2}}}{5^{\cancel{3}}}$

$$= 5^1 \cdot 2^2 = 20$$

6.27) $10.6849\overline{4}$

a) 10.68 b) 11

$11 - 10.68 = 0.32 = \frac{32}{100} = \frac{8}{25}$

6.28)

$$2.5\ ¢ \times a = 2000\ ¢$$

$$\frac{5}{2}\ ¢ \times a = 2000\ ¢$$

$$a = \frac{4000}{5} = 800$$

6.29)

(a) $\frac{11}{8} = \frac{11}{2^3} = \frac{11 \cdot 5^3}{2^3 \cdot 5^3} = \frac{1375}{10^3} = 1.375$

(b) $\frac{10}{7} = 10 \cdot \frac{1}{7} = 10\left(0.\overline{142857}\right)$

$= 1.\overline{428571}$

(c) $\frac{7}{15} = 0.4\overline{6}$

$0.4\overline{6}$
$15\overline{)7.0}$
60
100
90
100

(d) $\frac{39}{20} = \frac{39}{5^1 \cdot 2^2} = \frac{39 \cdot 5}{5^2 \cdot 2^2} = \frac{195}{100}$

$= 1.95$

(e) $\frac{25}{33} = 0.\overline{75}$

$0.\overline{75}$
$33\overline{)25.0}$
231
190
165
250

(f) $\frac{4}{21}$

$0.\overline{190476}$
$21\overline{)4.0}$
21
190
189
100
84
160
147
130
126
40

6.30) $\frac{4}{37} = 0.\overline{108}$

$0.\overline{108}$
$37\overline{)4.0}$
37
300
296
40

$100 \div 3$ tiene residuo 1. Por lo tanto el dígito será 1.

6.31)

(a) $0.\overline{6}$

$10x = 6.\overline{6}$
$-x = 0.\overline{6}$
$9x = 6$
$x = \frac{2}{3}$

(b) $0.\overline{97}$

$100x = 97.\overline{97}$
$-x = 0.\overline{97}$
$99x = 97$
$x = \frac{97}{99}$

(c) $0.0\overline{8}$

$100x = 8.\overline{8}$
$-10x = 0.\overline{8}$
$90x = 8$
$x = \frac{8}{90} = \frac{4}{45}$

(d) $0.\overline{36}$

$100x = 36.\overline{36}$
$-x = 0.\overline{36}$
$99x = 36$
$x = \frac{36}{99} = \frac{4}{11}$

(e) $0.3\overline{21}$

$1000x = 321.\overline{21}$
$-10x = 3.\overline{21}$
$990x = 318$

$x = \frac{318}{990} = \frac{106}{330} = \frac{53}{165}$

(F) $0.45\overline{9}$

$1000x = 469.\overline{9}$

$-100x = 45.\overline{9}$

$900x = 423$

$x = \frac{423}{900} = \frac{47}{100}$

$423 \overline{)9}\ 47$

36

63