

1) $\frac{3\cancel{m} | 1\cancel{cm} | 1 \text{ label}}{1\cancel{d} | 20\cancel{cm}} = 15 \text{ labels}$

15 $\frac{\cancel{\text{days}} | 24 \text{ hours}}{1 \cancel{\text{day}}}$

$24 \cdot 15 = 360 \text{ hours}$

3.6 $\cancel{\text{yr}}$	36 $\cancel{\text{d}}$	24 $\cancel{\text{hrs}}$	60 $\cancel{\text{min}}$	60 s
1 $\cancel{\text{yr}}$	1 $\cancel{\text{DAY}}$	1 $\cancel{\text{hr}}$	1 $\cancel{\text{min}}$	1 min

113529600 s

$20\text{ km} + 8\text{ m} + 4\text{ cm}$
 $20\text{ km} \left| \begin{array}{l} 1000\text{ m} \\ 1\text{ km} \end{array} \right. = 20000\text{ m}$
 $20\text{ km} \left| \begin{array}{l} 1000\text{ m} \\ 1\text{ km} \end{array} \right. \left| \begin{array}{l} 1\text{ cm} \\ .01\text{ m} \end{array} \right. = 20000000\text{ cm}$
 $8\text{ m} \left| \begin{array}{l} 1\text{ cm} \\ .01\text{ m} \end{array} \right. = 800$
 $2000000 \cdot 800 \cdot 4 = 6400000000\text{ cm}^3$
 $D = \frac{m}{V}$
 $1.72 \frac{g}{\text{cm}^3} \cdot 6400000000\text{ cm}^3 = 11080000000\text{ g}$
 $11080000000\text{ g} \left| \begin{array}{l} 1000000000\text{ g} \\ 1\text{ kg} \\ 1000\text{ g} \end{array} \right. = 1108000\text{ kg}$

$400\text{ km} \quad 60\text{ min}$

 $150\text{ min} \quad 1\text{ hr} = 160\text{ km/h}$
 160 km

#2)

3.6x	365d	24h	60 min	60s
	1x	1d	1h	1min

113,529,600s

4

325ms	0.001g	1kg
	1mg	1000g

.000325 kg 2.5

7692 tablets ←

250kg	1000g	1mg	1 tablet
1kg	.001g	325mg	

#7)

$$\begin{array}{r|l}
 15 \text{ d} & 24 \text{ h} \\
 \hline
 & 1 \text{ d} \\
 \hline
 360 & \\
 \hline
 1 & = 360 \text{ hrs.}
 \end{array}$$

#8)

$$\begin{array}{r|l|l}
 20 \text{ km} & 1000 \text{ m} & 1 \text{ cm} \\
 \hline
 & 1 \text{ km} & .01 \text{ m} = 2,000,000 \text{ cm}
 \end{array}$$

$$\frac{8 \text{ m}}{1 \text{ cm}} \times \frac{1 \text{ cm}}{0.01 \text{ m}} = 800 \text{ cm}$$

$$2,000,000 \text{ cm} \times 800 \text{ cm} \times 4 \text{ cm} = 6,400,000,000 \text{ cm}^3$$

$$D = \frac{m}{V}$$

$$1.72 \text{ g/cm}^3 = \frac{m}{6,400,000,000 \text{ cm}^3}$$

$$1.1008 \times 10^{10} \text{ g}$$

$$\frac{1.1008 \times 10^{10} \text{ g}}{1000 \text{ g}} = 11,008,000 \text{ kg}$$

$$11,008,000 \text{ kg}$$

#4)

$$\frac{325 \text{ mg} \cdot 0.001 \text{ g}}{1 \text{ mg}} \cdot \frac{1 \text{ kg}}{1,000 \text{ g}}$$

$$\begin{array}{r} 2.50 \text{ kg} \\ \cdot \\ \cdot 0.00325 \text{ kg/tablet} \end{array}$$

= 7692 tablets.

325 mg = 1 tablet

$$\frac{2.5 \text{ kg ibuprofen} \cdot 1000 \text{ g} \cdot 1 \text{ mg} \cdot 1 \text{ tablet}}{1 \text{ kg} \cdot 0.001 \text{ g} \cdot 325 \text{ mg}}$$

#6)

$$\frac{15 \text{ p} \cdot 31 \text{ mg}}{1 \text{ p}} = 465 \text{ mg}$$

#5)

$$\frac{8 \text{ K} | \cancel{1 \text{ hour}} | \cancel{10 \text{ min}}}{\cancel{1 \text{ hour}} | 60 \text{ min}} = 1.3 \text{ km}$$

#2)

$$\begin{array}{c|c|c|c|c} 3.6 \text{ y} & 365 \text{ d} & 24 \text{ h} & 60 \text{ min} & 60 \text{ s} \\ \hline & 1 \text{ y} & 1 \text{ d} & 1 \text{ h} & 1 \text{ min} \end{array}$$

113,529,600 seconds in 3.6 yrs.

#8)

$$\frac{20 \text{ km} | 1000 \text{ m} | 20,000 \text{ m} | 1 \text{ cm}}{1 \text{ km} | .01 \text{ m}}$$

$$= 20,000,000 \text{ cm}$$

$$\frac{8 \text{ m} | 1 \text{ cm}}{.01 \text{ m}} = 800 \text{ cm}$$

$$800 \times 4 \times 2,000,000$$

$$= 6,400,000,000 \times 1.72 \frac{\text{g}}{\text{cm}^3}$$

$$= 110,080,000,000.0000 \text{ g}$$

$$\frac{110,080,000,000.0000 \text{ g} | 1 \text{ kg}}{1000 \text{ g}}$$

$$= 110,080,000 \text{ kg}$$