

1. Supply the missing half of each of the conversion ratios (the first one is done for you):

$$\frac{m}{10^{-3}} \quad \frac{K}{10^3} \quad \frac{n}{10^{-9}} \quad \frac{c}{10^{-2}} \quad \frac{10^6}{\mu} \quad \frac{10^6}{M}$$

2. Use the above ratios to perform the following conversions:

a. 5 mL to L:  $\frac{5 \text{ mL}}{10^{-3}} = 5 \times 10^{-3} \text{ L}$

b. 636 L to mL:  $\frac{636 \text{ L}}{10^{-3}} = 6.36 \times 10^5 \text{ mL}$

c. 55 feet to milli feet:  $\frac{55 \text{ ft}}{10^{-3}} = 5.5 \times 10^4 \text{ milli feet}$

d. 235 mL to  $\mu\text{L}$ :  $\frac{235 \text{ mL}}{10^{-3}} \times \frac{\mu}{10^{-6}} = 2.35 \times 10^5 \mu\text{L}$

e. shortcut  $\rightarrow$  485 nm to mm:  $\frac{485 \times 10^{-9} \text{ m}}{10^{-3}} = 485 \times 10^{-6} \text{ mm}$   
or  $4.85 \times 10^{-4} \text{ mm}$

f. 505 km to mm:  $\frac{505 \times 10^3 \text{ m}}{10^{-3}} = 505 \times 10^6 \text{ mm}$   
 $5.05 \times 10^8 \text{ mm}$

g. 27 inches to milli inches:  $\frac{27 \text{ in}}{10^{-3}} = 27 \times 10^3 \text{ mm} = 2.7 \times 10^4 \text{ mm}$

h. 485 g to mg:  $\frac{485 \text{ g}}{10^{-3}} = 485 \times 10^3 \text{ mg} = 4.85 \times 10^5 \text{ mg}$

i. 45 kg to mg:  $\frac{45 \times 10^3 \text{ g}}{10^{-3}} = 45 \times 10^6 \text{ mg} = 4.5 \times 10^7 \text{ mg}$

j. 333 mg to kg:  $\frac{333 \times 10^{-3} \text{ g}}{10^3} = 333 \times 10^{-6} \text{ kg} = 3.33 \times 10^{-4} \text{ kg}$