

Science 10 UNIT CONVERSIONS Practice sheet

Convert the following using the fraction method: SHOW YOUR WORK	
1. 4.0cm to metres $4.0\text{cm} \times \frac{1\text{m}}{100\text{cm}} = \frac{.04\text{m}}{4.0 \times 10^{-2}\text{m}}$	9. 3.7g to kg $3.7\text{g} \times \frac{1\text{kg}}{1000\text{g}} = .0037\text{kg}$ $3.7 \times 10^{-3}\text{kg}$
2. 4.0 km to metres $4.0\text{km} \times \frac{1000}{1\text{km}} = \frac{4000\text{m}}{4.0 \times 10^3\text{m}}$	10. 100g to mg $100\text{g} \times \frac{1000\text{mg}}{1\text{g}} = 100,000\text{mg}$ $1.0 \times 10^5\text{mg}$
3. 14L to mL $14\text{L} \times \frac{1000\text{mL}}{1\text{L}} = \frac{14000\text{mL}}{1.4 \times 10^4\text{mL}}$	11. 370mg to kg $370\text{mg} \times \frac{1\text{g}}{1000\text{mg}} \times \frac{1\text{kg}}{1000\text{g}} = .00037\text{kg}$ $3.7 \times 10^{-4}\text{kg}$
4. 35mL to L $35\text{mL} \times \frac{\text{L}}{1000\text{mL}} = \frac{.035\text{L}}{3.5 \times 10^{-2}\text{L}}$	12. 300 L to uL $300\text{L} \times \frac{1\text{uL}}{10^6\text{L}} = 3.0 \times 10^8\text{uL}$ $300\text{L} \times \frac{1000\text{mL}}{1\text{L}} \times \frac{1000\text{uL}}{1\text{mL}} = 300,000,000\text{uL}$ $1\text{L} = 1000\text{mL}$ $1\text{L} = 10^6\text{uL}$ $10^{-6}\text{L} = 1\text{uL}$
5. 5g to mg $5\text{g} \times \frac{1000\text{mg}}{1\text{g}} = \frac{5000\text{mg}}{5.0 \times 10^3\text{mg}}$	13. 75cm to km $75\text{cm} \times \frac{1\text{m}}{100\text{cm}} \times \frac{1\text{km}}{1000\text{m}} = .00075\text{km}$ $\text{or } 7.5 \times 10^{-5}$
6. 5g to kg $5\text{g} \times \frac{1\text{kg}}{1000\text{g}} = \frac{.005\text{kg}}{5.0 \times 10^{-3}\text{kg}}$	14. 29km to m $29\text{km} \times \frac{1000\text{m}}{\text{km}} = \frac{29000\text{m}}{2.9 \times 10^4\text{m}}$
7. 89g to kg $89\text{g} \times \frac{1\text{kg}}{1000\text{g}} = \frac{.089\text{kg}}{8.9 \times 10^{-2}\text{kg}}$	15. 29km to cm $29\text{km} \times \frac{1000\text{m}}{\text{km}} \times \frac{100}{\text{m}} = 2900000\text{cm}$ $\text{or } 2.9 \times 10^6\text{cm}$

16. Convert 37weeks to seconds:

$$37\text{wk} \times \frac{7\text{days}}{1\text{wk}} \times \frac{24\text{hrs}}{1\text{day}} \times \frac{60\text{min}}{1\text{hr}} \times \frac{60\text{sec}}{1\text{min}} = 22,377,600\text{sec}$$

$$2.2 \times 10^7\text{sec}$$

1wk = 7days  
1day = 24hrs  
1hr = 60min  
1m = 60sec

17. Convert 1year to minutes

$$1\text{yr} \times \frac{365\text{days}}{1\text{yr}} \times \frac{24\text{hrs}}{\text{day}} \times \frac{60\text{min}}{1\text{hr}} = 525,600\text{min}$$

$$5.26 \times 10^5\text{min}$$

1yr = 365 days  
1day = 24hrs

18. How many mL in a 1ton of pure water? (there are 907.184L in 1 ton of pure water)

$$1\text{t} \times \frac{907.184\text{L}}{1\text{ton}} \times \frac{1000\text{mL}}{1\text{L}} = 907,184\text{mL}$$

or

$$9.07 \times 10^5\text{mL}$$

1t = 907.184L  
1L = 1000mL