

Make the following unit conversions: Show all work for full marks. All answers MUST be put into scientific notation.

- 1) 314 m into km (3)

$$314 \text{ m} \times \frac{1 \text{ km}}{1000 \text{ m}} = 0.314 \text{ km}$$

$$\boxed{3.14 \times 10^{-1} \text{ km}}$$

- 2) 0.129 L into
- μL
- (3)

$$0.129 \text{ L} \times \frac{1,000,000 \mu\text{L}}{1 \text{ L}} = 129,000 \mu\text{L}$$

$$\boxed{1.29 \times 10^5 \mu\text{L}}$$

- 3) 311 mg into Kg (3)

$$311 \text{ mg} \times \frac{1 \text{ kg}}{1,000,000 \text{ mg}} = \boxed{3.11 \times 10^{-4} \text{ kg}}$$

Alt method

$$311 \text{ mg} \times \frac{1 \text{ g}}{1000 \text{ mg}} \times \frac{1 \text{ kg}}{1000 \text{ g}} = \text{SAME ANSWER}$$

still 2

- 4) 1812 s into years (3)

$$1812 \text{ s} \times \frac{1 \text{ min}}{60 \text{ s}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ year}}{365 \text{ day}} = \boxed{5.74 \times 10^{-5} \text{ years}}$$

- 5)
- $12 \frac{1}{2}$
- in to
- $\frac{1}{\text{min}}$
- (3)

$$\frac{12}{2} \times \frac{60 \text{ s}}{1 \text{ min}} = 720 \text{ min}$$

$$\boxed{7.2 \times 10^2 \text{ min}}$$