① a) 5.8×10^{3} m

b) 4.5×10^{5} m

c) 3.02×10^{8} m

d) 8.6×10^{10} m

② a) 5.8×10^{-4} Kg

b) 4.5×10^{-7} Kg

c) 3.6×10^{-3} Kg

d) 4×10^{-3} Kg

③ a) 3.0×10^{8} s

b) 1.86×10^{5} s

c) 9.3×10^{7} s

④ a) 325 000 000 Kg

b) 0.000 000 000 000 000 000 160 2 C

c) 5×10^{-9} s = 0.000 000 005 s

⑤ a) $1.1 \text{ cm} \times \frac{1 \text{ m}}{100 \text{ cm}} = 0.011 \text{ m}$

b) $76.2 \text{ pm} \times \frac{1 \text{ m}}{1\,000\,000\,000\,000 \text{ pm}} = 7.62 \times 10^{-11} \text{ m}$

c) $2.1 \text{ Km} \times \frac{1000 \text{ m}}{1 \text{ Km}} = 2100 \text{ m}$

d) $0.123 \text{ Mm} \times \frac{1\,000\,000 \text{ m}}{1 \text{ Mm}} = 123\,000 \text{ m}$

⑥ a) $147 \text{ g} \times \frac{1 \text{ Kg}}{1000 \text{ g}} = 0.147 \text{ Kg}$

b) $11 \mu\text{g} \times \frac{1 \text{ g}}{1\,000\,000 \mu\text{g}} \times \frac{1 \text{ Kg}}{1000 \text{ g}} = 1.1 \times 10^{-8} \text{ Kg}$

⑥ c) $7.23\ Mg \times \frac{1\,000\,000\ g}{1\ Mg} \times \frac{1\ Kg}{1000\ g} = 7230\ Kg$

d) $478\ mg \times \frac{1\ g}{1000\ mg} \times \frac{1\ Kg}{1000\ g} = 4.78 \times 10^{-4}\ Kg$

⑦ $2500\ m \times \frac{1\ Km}{1000\ m} = 2.5\ Km$

$2500\ m \times \frac{100\ cm}{1\ m} = 250\,000\ cm$

⑧ $2.5\ mL \times \frac{L}{1000\ mL} = 0.0025\ L$

$0.0025\ L \times \frac{10^3\ cm^3}{1\ L} = 2.5\ cm^3$

⑨ $9.2\ \mu s \times \frac{1\ s}{1\,000\,000\ \mu s} \times \frac{10^{12}\ ps}{1\ s} = 9.2 \times 10^{6}\ ps$

⑩ $11.6\ mg \times \frac{1\ g}{1000\ mg} = 0.0116\ g$

$1021\ \mu g \times \frac{1\ g}{1\,000\,000\ \mu g} = 0.001021\ g$

$0.000\,006\ Kg \times \frac{1000\ g}{1\ Kg} = 0.006\ g$

$0.31\ mg \times \frac{1\ g}{1000\ mg} = 0.00031\ g$

$0.31\ mg$, $1021\ \mu g$, $0.000\,006\ Kg$, $11.6\ mg$

(11) 1 microcentury = 1×10^{-6} century

1×10^{-6} cent $\times \frac{100 \text{ year}}{1 \text{ cent}} = 1 \times 10^{-4}$ years

1×10^{-4} y $\times \frac{365 \text{ d}}{\text{y}} \times \frac{24 \text{ h}}{\text{d}} \times \frac{60 \text{ min}}{\text{h}} = 52.56$ min

(12) 1 L $\times \frac{1 \text{ gal}}{3.7853 \text{ L}} = 0.2642$ gal

0.2642 gal $\times \frac{\$1.069}{\text{gal}} = \$0.282$

∴ $0.282 / L (I wish)

(13) 365 d $\times \frac{3 \text{ s}}{\text{d}} = 1095$ s

1095 s $\times \frac{1 \text{ min}}{60 \text{ s}} = 18.25$ min

(14) ie. how many ~~hours~~ minutes in 3 years

3 yr $\times \frac{365 \text{ d}}{\text{y}} \times \frac{24 \text{ h}}{\text{d}} \times 60 =$ ~~26 280~~ 1 576 800 h

∴ 26 280 revolutions

(15) 340 m/s $\times$ 3.6 = 1224 Km/h