② ① $T_1 = 10^\circ C = 283K$, $P_1 = 3$ atm ② $T_2 = 30^\circ C = 303K$, $P_2 = ?$

$$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$

$$\frac{3}{283} = \frac{P_2}{303} \Rightarrow P_2 = \frac{303 \cdot 3}{283} = 3'21 \text{ atm}$$

③ ① $T_1 = 27^\circ C = 300K$, $P_1 = 5$ atm, $V_1 = 49'26$ l ② $T_2 = 0^\circ C = 273K$, $P_2 = 1$ atm, $V_2 = ?$

$$\frac{P_1 \cdot V_1}{T_1} = \frac{P_2 \cdot V_2}{T_2} \qquad \frac{5 \cdot 49'26}{300} = \frac{1 \cdot V_2}{273}$$

$$V_2 = \frac{273 \cdot 5 \cdot 49'26}{300} = \underline{224'1 \text{ l}}$$

(5)

a) $450 \cdot 10^{12}\ cm = 4'5 \cdot 10^{14}\ cm \cdot \frac{10^{-2}\ m}{1\ cm} \cdot \frac{Mm}{10^{6}\ m} = 4'5 \cdot 10^{6}\ Mm$

b) $0'7 \cdot 10^{23}\ \mu g = 7 \cdot 10^{22}\ \mu g \cdot \frac{10^{-6}\ g}{\mu g} \cdot \frac{Gg}{10^{9}\ g} = 7 \cdot 10^{5}\ Gg$

c) $7800000000\ dam^3 = 7'8 \cdot 10^{9}\ dam^3 \cdot \frac{10^{3}\ m^3}{dam^3} \cdot \frac{10^{3}\ l}{1\ m^3} \cdot \frac{1\ Kl}{10^{3}\ l} =$

$= \underline{\underline{7'8 \cdot 10^{12}\ Kl}}$

d) $300°F \longrightarrow K$

$°C = \frac{(300-32)\cdot 100}{180} = 148'9°C + 273 = 421'9\ K$

e) $0'00034\ Km^2 = 3'4 \cdot 10^{-4}\ Km^2 \cdot \frac{10^{6}\ m^2}{1\ Km^2} \cdot \frac{1\ ha}{10^{4}\ m^2} = 3'4 \cdot 10^{-2}\ ha$

f) $0'0000007\ m^3 = 7 \cdot 10^{-7}\ m^3 \cdot \frac{10^{3}\ l}{m^3} \cdot \frac{dl}{10^{-1}\ l} = 7 \cdot 10^{-3}\ dl$

g) $1000\ K - 273 = \underline{\underline{727\ °C}}$

h) $400000000\ \mu m = 4 \cdot 10^{8}\ \mu m \cdot \frac{10^{-6}\ m}{\mu m} \cdot \frac{1\ dm}{10^{-1}\ m} = 4 \cdot 10^{3}\ dm$

i) $25\ \frac{m}{s} = 90\ \frac{Km}{h}$