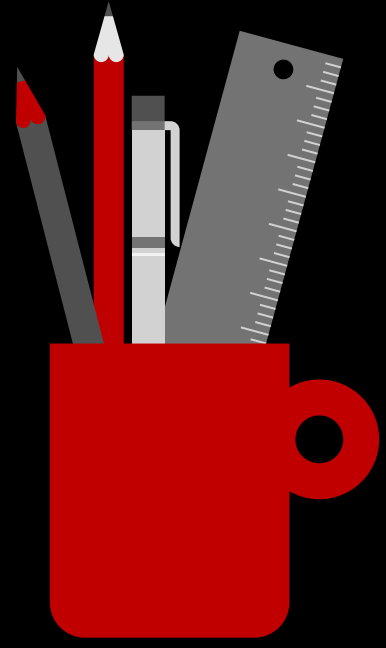


Don't forget to Subscribe



Don't forget to Subscribe



② A gas is expanding according to the law $PV^n = C$
Find C when $P = 80$, $V = 3.1$ and $n = \frac{5}{4}$

Solⁿ

$$PV^n = C$$

$$C = PV^n$$

$$C = 80 \times (3.1)^{5/4}$$

$$\log C = \log 80 \times (3.1)^{5/4}$$

$$\log C = \log 80 + \log (3.1)^{5/4}$$

$$\log C = \log 80 + \frac{5}{4} \log 3.1$$

$$= 1.9031 + \frac{5}{4} (0.4914)$$

$$\log C = 1.9031 + 0.6142$$

$$\log C = 2.5173$$

$$C = \text{antilog } 2.5173$$

$$Ch = 2, \text{ Min.} = .5173$$

$$C = 3,29.08$$

$$C = \underline{\underline{329.08}}$$



③

$$P = 90(5)^{-\frac{v}{10}}$$

$$P = 18.009$$

$$v = ?$$

Solⁿ-

$$18 = 90 \times (5)^{-\frac{v}{10}}$$

taking log of both sides

$$\log 18 = \log 90 \times (5)^{-\frac{v}{10}}$$

$$\log 18 = \log 90 + \log (5)^{-\frac{v}{10}}$$

$$\log 18 = \log 90 - \frac{v}{10} \log 5$$

$$1.2553 = 1.9542 - \frac{v}{10} (0.6990)$$

$$1.2553 = 1.9542 - v(0.0699)$$

$$v(0.0699) = 1.9542 - 1.2553$$

$$v(0.0699) = 0.6989$$

$$v = \frac{0.6989}{0.0699}$$

$$v = 10$$

==



④ $A = \pi r^2$ $A = ?$ $\pi = \frac{22}{7}$ and $r = 15$

Solⁿ $A = \pi r^2$

$$A = \frac{22}{7} \times (15)^2$$

$$\log A = \log \frac{22}{7} \times (15)^2$$

$$\log A = \log 22 - \log 7 + \log (15)^2$$

$$\log A = \log 22 - \log 7 + 2 \log 15$$

$$= 1.3424 - 0.8451 + 2(1.1761)$$

$$= 1.3424 - 0.8451 + 2.3522$$

$$\log A = 2.8495$$

$$A = \text{antilog } 2.8495$$

$$\text{Ch.} = 2, \text{ Mantissa} = 0.8495$$

$$A = 7,07.13$$

$$A = \underline{\underline{707.13}}$$



$$\textcircled{5} \quad V = \frac{1}{3} \pi r^2 h \quad V = ? \quad \pi = \frac{22}{7} \rightarrow r = 2.5$$
$$h = 4.2$$

Solⁿ $V = \frac{1}{3} \pi r^2 h$

$$V = \frac{1}{3} \times \frac{22}{7} \times (2.5)^2 \times (4.2)$$

$$\log V = \log \frac{1}{3} \times \frac{22}{7} \times (2.5)^2 \times 4.2$$

$$\log V = \log 1 - \log 3 + \log 22 - \log 7 + \log (2.5)^2 + \log 4.2$$

$$= 0 - 0.4771 + 1.3424 - 0.8451 + 2 \log 2.5 + 0.6232$$

$$= 0.6434 + 2(0.3979)$$

$$\log V = 0.6434 + 0.7958$$

$$\log V = 1.4392$$

$$V = \text{antilog } 1.4392$$

$$\text{Ch.} = 1, \text{Min.} = .4392$$

$$V = 2, 7.49$$

$$V = \underline{\underline{27.49}}$$