

KCL :-

$$R_p = \frac{1 \times 1}{1+1} = 0.5 \text{ k}\Omega$$

$$R = 1 + 0.5 = 1.5 \Omega$$

$$I = \frac{V}{R} = \frac{3}{1.5} = 2 \text{ A}$$

current division :-

$$I = I_1 \times \frac{R_1}{R_1 + R_2}$$

$$I_1 = 2 \text{ mA} \times \frac{1 \text{ k}\Omega}{2 \text{ k}\Omega}$$

$$I_1 = 1 \text{ mA}$$

$$I_2 = \frac{I \times R_2}{R_1 + R_2}$$

$$= \frac{2 \text{ mA} \times 1 \text{ k}\Omega}{2 \text{ k}\Omega}$$

$$\begin{aligned} I &= I_1 + I_2 \\ &= 1 \text{ mA} + 1 \text{ mA} \\ &= 2 \text{ mA} \end{aligned}$$