

$$Q = 4kl$$

$$P_k = 80A, P_l = 20A$$

$$\textcircled{1} k_0 = 2$$

$$Q = 4(2)l \Rightarrow Q = 8l$$

$$\Rightarrow l = \frac{Q}{8}$$

$$CT = 8k + 2l$$

$$\Rightarrow CT = 8(2) + 2\left(\frac{Q}{8}\right)$$

$$\Rightarrow \boxed{CT = \frac{1}{4}Q + 16}$$

$$\textcircled{2} CT = \frac{1}{4}Q + 16$$

$$\cdot CF = 16$$

$$\cdot CV = \frac{1}{4}Q$$

$$\cdot CM = \frac{CT}{Q} = \frac{1}{4} + \frac{16}{Q}$$

$$\cdot CFM = \frac{CF}{Q} = \frac{16}{Q}$$

$$\cdot CVM = \frac{CV}{Q} = \frac{1}{4}$$

$$\cdot Cmg = CT' = \frac{1}{4}$$

$$\textcircled{3} \frac{P_{mgk}}{P_k} = \frac{P_{mgl}}{P_l} \Rightarrow \frac{4l}{8} = \frac{4k}{2}$$

$$\Rightarrow \frac{l}{2} = 2k \Rightarrow \boxed{l = 4k}$$

$$Q = 4k(4k)$$

$$\Rightarrow Q = 16k^2$$

$$\Rightarrow k^2 = \frac{Q}{16} \Rightarrow k = \frac{1}{4}Q^{\frac{1}{2}}$$

$$CT = 8k + 2l$$

$$\Rightarrow CT = 8k + 2(4k)$$

$$\Rightarrow CT = 16k$$

$$\Rightarrow CT = 16\left(\frac{1}{4}Q^{\frac{1}{2}}\right)$$

$$\Rightarrow \boxed{CT = 4 \cdot Q^{\frac{1}{2}}}$$

$$\textcircled{4} CT = 4 \cdot Q^{\frac{1}{2}}$$

$$\cdot CM = \frac{CT}{Q} = 4 \cdot Q^{-\frac{1}{2}}$$

$$\cdot Cmg = CT' = 2 \cdot Q^{-\frac{1}{2}}$$

$$\textcircled{5} \pi = RT - CT$$

$$\Rightarrow \pi = P \cdot Q - 4Q^{\frac{1}{2}}$$

$$\Rightarrow \pi = (4)(25) - 4(25)^{\frac{1}{2}}$$

$$\Rightarrow \pi = 100 - 20$$

$$\Rightarrow \boxed{\pi = 800A}$$