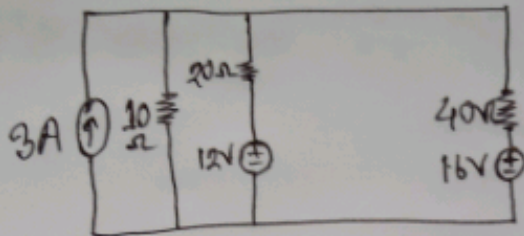


⊛ Use source transformation to reduce the circuit in a single voltage source and a single resistor.



$$\therefore I_1 = \frac{V_1}{R_1} = \frac{12V}{20\Omega} = 0.6A$$

$$\therefore I_2 = \frac{V_2}{R_2} = \frac{16V}{40\Omega} = 0.4A$$

Given,  $I_3 = 3A$

$$\therefore I = \{3 - (0.6 + 0.4)\}$$

$$= 2A$$

$$\therefore \frac{1}{R_P} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$= \frac{4 + 2 + 1}{40}$$

$$= \frac{7}{40}$$

$$\therefore R_P = 5.72 \Omega$$

$$\therefore V = IR = (5.72 \times 2) = 11.42V$$

Answer