



Know: $I_3 = 3A$

Find: $I_1, I_2, \& E_2$

Question at a: $I_1 + I_2 = I_3$ (1)

Left loop \square from a: $-I_3 R_2 + E_1 - I_1 R_3 = 0$ (2)

$$I_1 = \frac{E_1 - I_3 R_2}{R_3} = \underline{1.0A}$$

So, equate (1) \rightarrow

$$I_2 = I_3 - I_1 = \underline{2.0A}$$

Now, right loop \square from a

$$+I_2 R_1 - E_2 + I_3 R_2 = 0$$

So, $E_2 = \underline{I_2 R_1 + I_3 R_2} = 15V$