



③

$$\begin{aligned} \text{Loop A: } 4 - 9 &= 5.9i_A + 2.7(i_A - i_B) \\ -5 &= 8.6i_A - 2.7i_B \end{aligned}$$

$$\begin{aligned} \text{Loop B: } 9 - 6 &= 2.7(i_B - i_A) + 3.2i_B \\ 3 &= -2.7i_A + 5.9i_B \end{aligned}$$

$$i_B = 3.185i_A + 1.852$$

$$3 = -2.7i_A + 5.9(3.185i_A + 1.852)$$

$$3 = -2.7i_A + 18.7915i_A + 10.9268$$

$$-7.9268 = 16.0915i_A \quad \underline{i_A = -.493 \text{ mA}}$$

$$i_B = 3.185(-.493) + 1.852 = .282 \text{ mA}$$

current through 4.5 is $i_A = -.493 \text{ mA}$

current through 2.7 is $i_A - i_B = -.775 \text{ mA}$

voltage across 3.2 is $3.2i_B = .902 \text{ V}$