



Obtener todos los voltajes  
y corrientes del circuito

$$I_C = \beta I_B = (100)(20 \times 10^{-6})$$

$$I_C = 2 \times 10^{-3} A = 2mA$$

$$I_E = I_C + I_B$$

$$I_E = 2 \times 10^{-3} + 20 \times 10^{-6}$$

$$I_E = 2.02 \times 10^{-3} = 2.02mA$$

$$V_E = I_E R_E = (2.02 \times 10^{-3})(1.2 \times 10^3)$$

$$V_E = 2.424 [V]$$

$$V_{CC} = V_C + I_C R_C = (10.6) + [(2 \times 10^{-3})(2.7 \times 10^3)]$$

$$V_{CC} = 16 [V]$$

$$V_B = V_E + V_{BE} = 2.4 + 0.7 = 3.1 [V]$$

$$I_2 = \frac{V_B - 0}{R_2} = \frac{3.1 - 0}{8.2 \times 10^3} = 0.378mA$$

$$I_1 = I_2 + I_B = (0.378 \times 10^{-3}) + (20 \times 10^{-6})$$

$$I_1 = 398 \mu A$$

$$R_1 = \frac{16 - 3.1}{398 \times 10^{-6}} = 32.4 k\Omega$$