



$$V_{BB} = \frac{I_E R_B}{\beta + 1} + V_{BE} + I_E R_E$$
$$I_E = \frac{V_{BB} - V_{BE}}{\frac{R_B}{\beta + 1} + R_E} \approx I_C$$

$$R_E = 10 \left(\frac{R_B}{\beta + 1} \right)$$