

AMPLIFICATION:

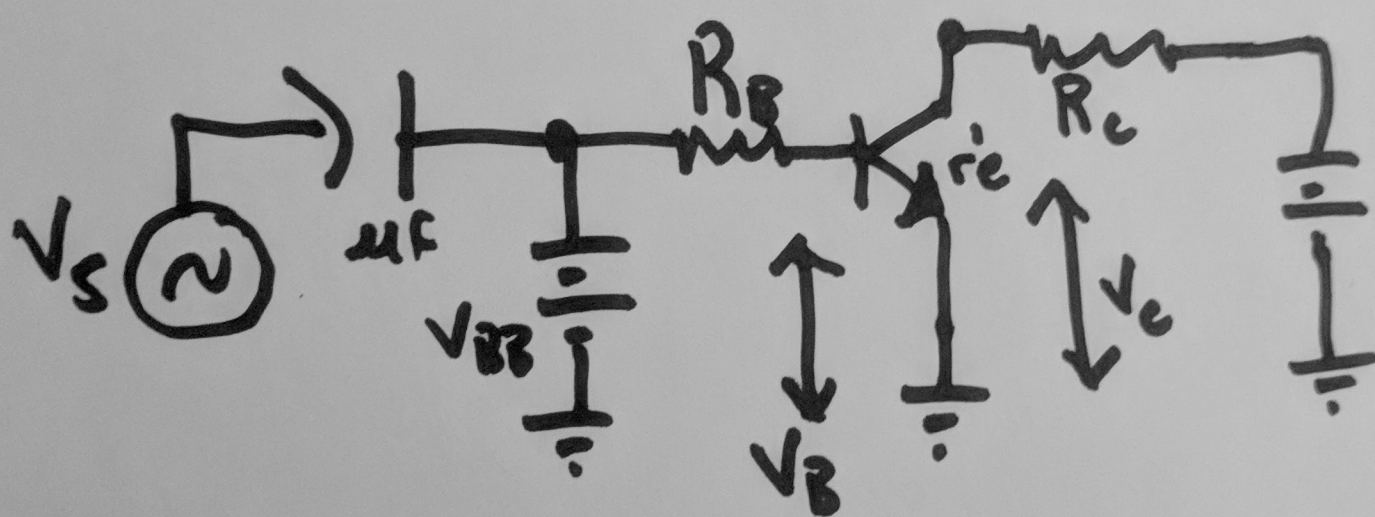
- INCREASE AMPLITUDE OF SIGNAL
- VOLTAGE

ACTIVE REGION OF TRANSISTOR:

$B E = \text{LOW RESISTANCE}$

$B C = \text{HIGH RESISTANCE}$

$\beta = \text{CURRENT GAIN}$



$$V_b = I_e r'_e$$

$$V_c = I_c R_c$$

$$V_b = V_s - I_b R_B$$

$$\frac{V_c}{V_b} = A_v = \text{Voltage Gain}$$

$$A_v \approx \frac{I_e R_c}{I_e r'_e} \approx \frac{R_c}{r'_e}$$