

AMPLIFICATION:

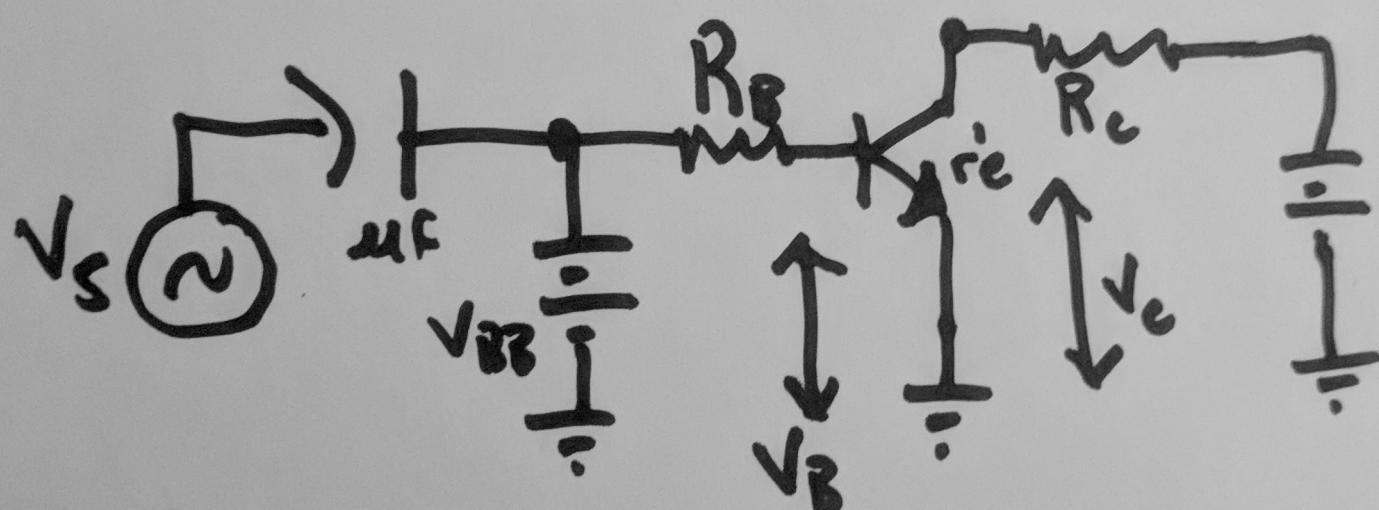
- INCREASE AMPLITUDE OF SIGNAL
- VOLTAGE

ACTIVE REGION OF TRANSISTOR:

B_E = LOW RESISTANCE

B_C = HIGH RESISTANCE

β = CURRENT GAIN



$$V_b = I_c r_e$$

$$V_c = I_c R_C$$

$$V_b = V_s - I_b R_B$$

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

$$A_v \approx \frac{I_c R_C}{I_c r'e} \approx \frac{R_C}{r'e}$$