

BE

BE



$$I_b = (V_B - V_{BE}) / R_B$$

$$= \beta I_b = 10 \cdot 0.43 \text{mA} = 4.3 \text{mA}$$

$$= I_C * R_C = 4.3\text{mA} * 1\text{KOHM} = 4.3\text{V}$$

$$= V_{CC} - V_C = 10V - 4.3V = 5.7V$$

$$I_c = 5.3\text{mA}$$

$$V_c = 5.3\text{V}$$

$$= 10\text{V} - 5.3\text{V} = 4.7\text{V}$$

$$V_{BE} = 0.7\text{V}$$

$$I_b = 0.53\text{mA}$$

$$I_C = 8.6\text{mA}$$

$$V_C = 8.6\text{V}$$

$$= 10\text{V} - 8.6\text{V} = 1.4\text{V}$$

$$V_{BE} = 0.7\text{V}$$

$$I_b = 0.43\text{mA}$$



$$= 10V - 8.6V = 1.4V$$

BE

b

$$I_C = 8.6\text{mA} ; I_{C\text{max}} = 10\text{V}/2\text{K}\Omega = 5\text{mA}$$

$I_C > I_{C\text{max}}$  i.e SATURATION MODE i.e  $V_C = V_{CC}$   
 $= 0\text{V}$

$$V_{BE} = 0.7\text{V}$$
$$I_b = 0.43\text{mA}$$