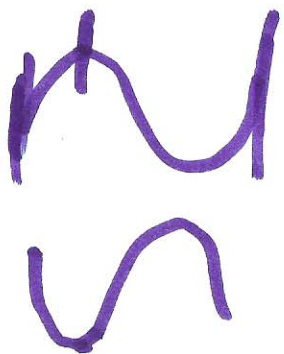


40.16

Sec. 31.8

Loop gain



$$A_{CL} = \frac{A_{OL}}{1 + \beta A_{OL}}$$

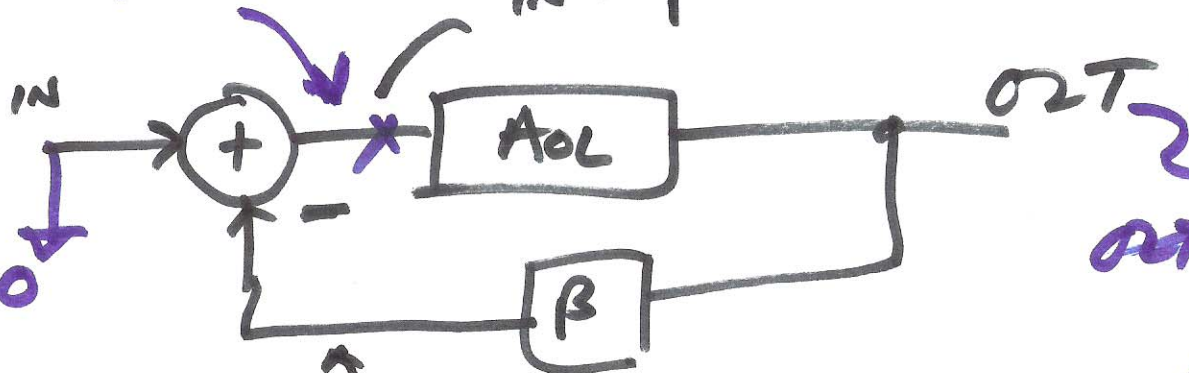
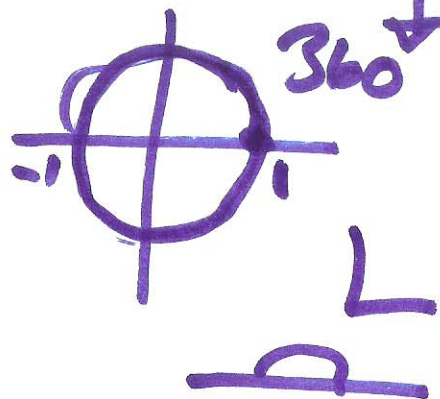
$$\beta A_{OL} = -1$$

$$|\beta A_{OL}| = 1$$

$$\angle \beta A_{OL} = 180$$

$$-\beta \cdot OUT$$

$$IN - \beta \cdot OUT$$

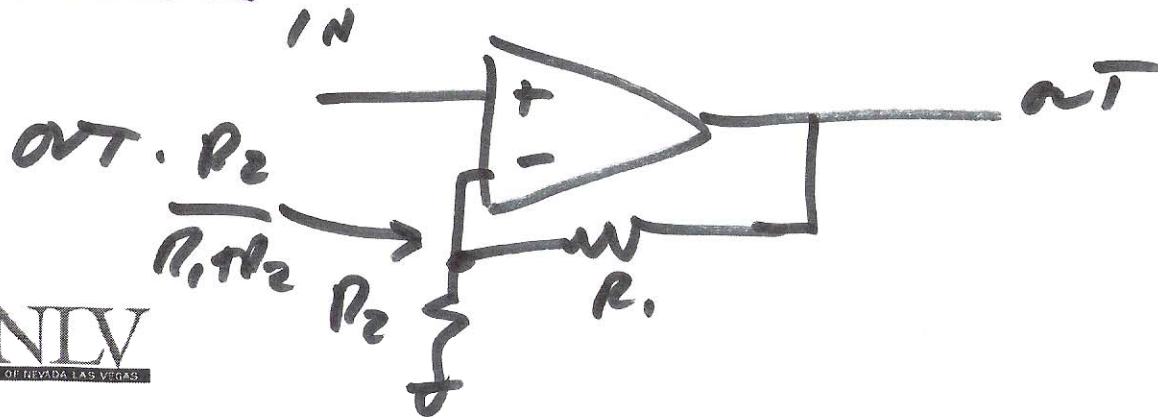


$$OUT = A_{OL} \cdot$$

$$(-\beta \cdot OUT)$$

$$-1 = A_{OL} \cdot \beta$$

$$f.b. = \beta \cdot OUT$$



1)