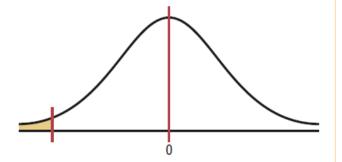
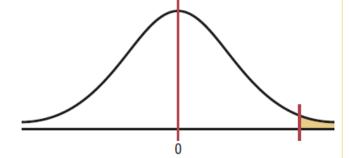
## z-test Critical Values

$$\begin{array}{ll} H_0: \ \mu & \geq \ k \\ H_1: \ \mu & < \ k \end{array} \left\{ \begin{array}{ll} \alpha = 0.10, \ \text{C.V.} = -1.28 \\ \alpha = 0.05, \ \text{C.V.} = -1.65 \\ \alpha = 0.01, \ \text{C.V.} = -2.33 \end{array} \right.$$



(a) Left-tailed

$$H_0$$
:  $\mu \le k$   $\begin{cases} \alpha = 0.10, \text{ C.V.} = +1.28 \\ \alpha = 0.05, \text{ C.V.} = +1.65 \\ \alpha = 0.01, \text{ C.V.} = +2.33 \end{cases}$ 



(b) Right-tailed

$$H_0$$
:  $\mu = k$  
$$H_1$$
:  $\mu \neq k$  
$$\begin{cases} \alpha = 0.10, \text{ C.V.} = \pm 1.65 \\ \alpha = 0.05, \text{ C.V.} = \pm 1.96 \\ \alpha = 0.01, \text{ C.V.} = \pm 2.58 \end{cases}$$

(c) Two-tailed

