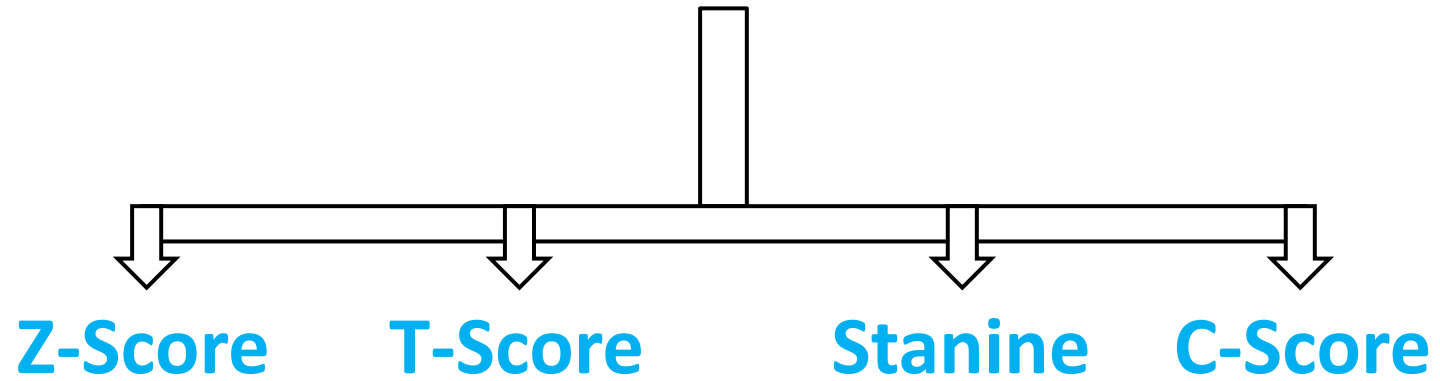
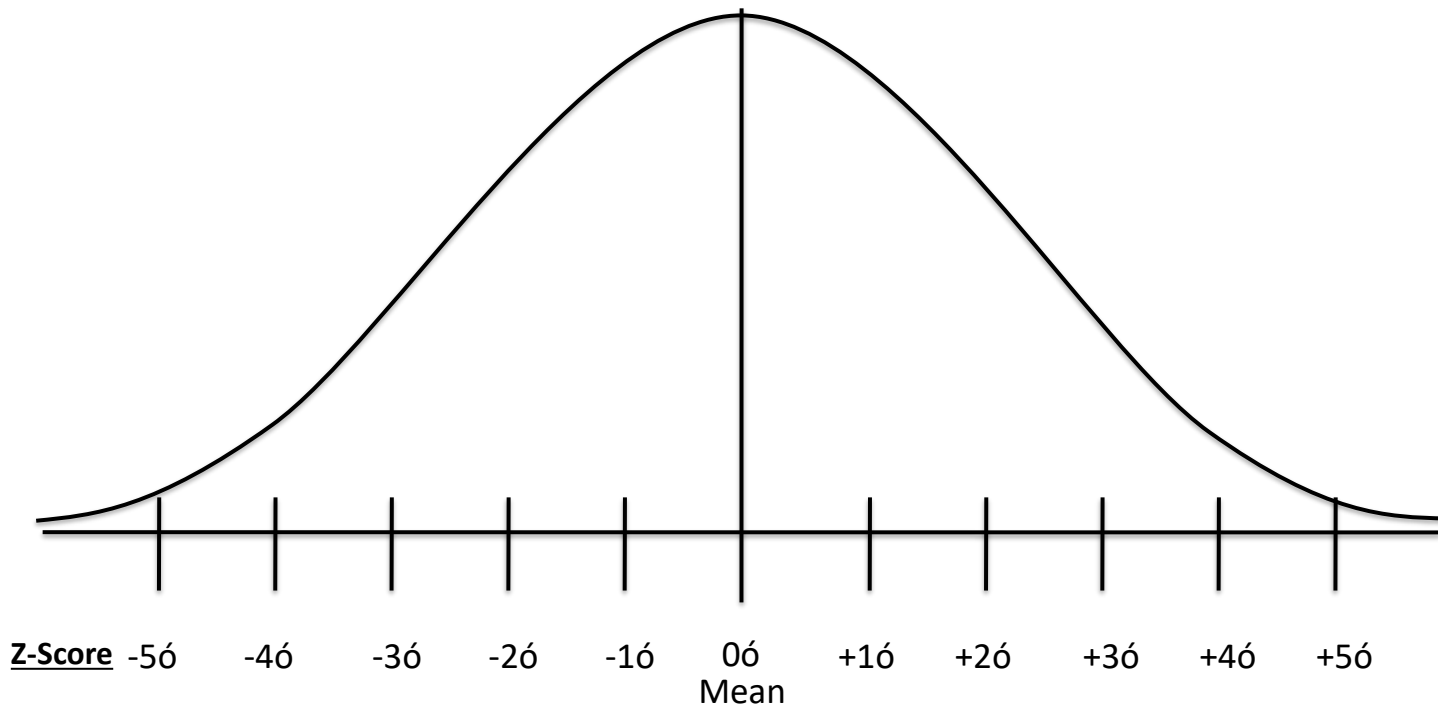


# Standard Score



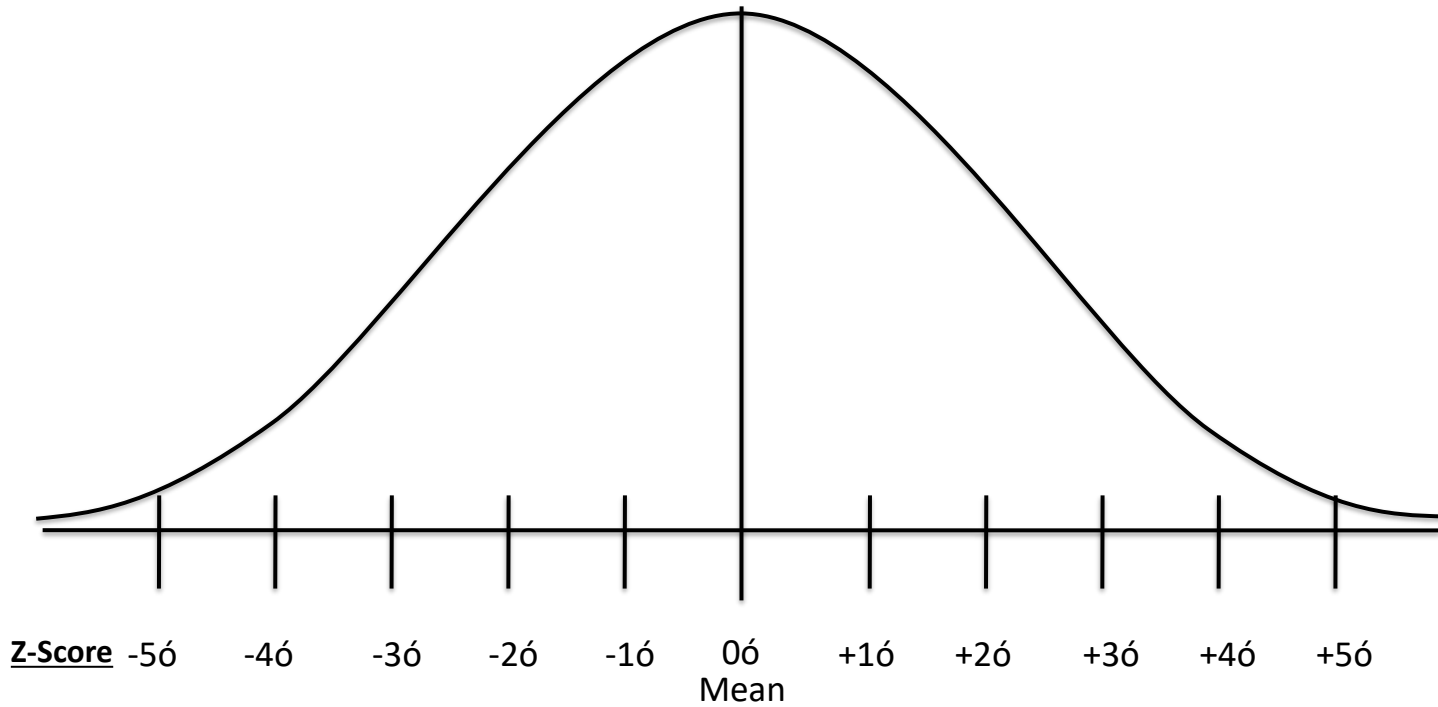


**Mean= 0**

**S.D.= 1**

**Range= -3 to +3**

# Z-Score



$$Z = \frac{X - M}{\sigma}$$

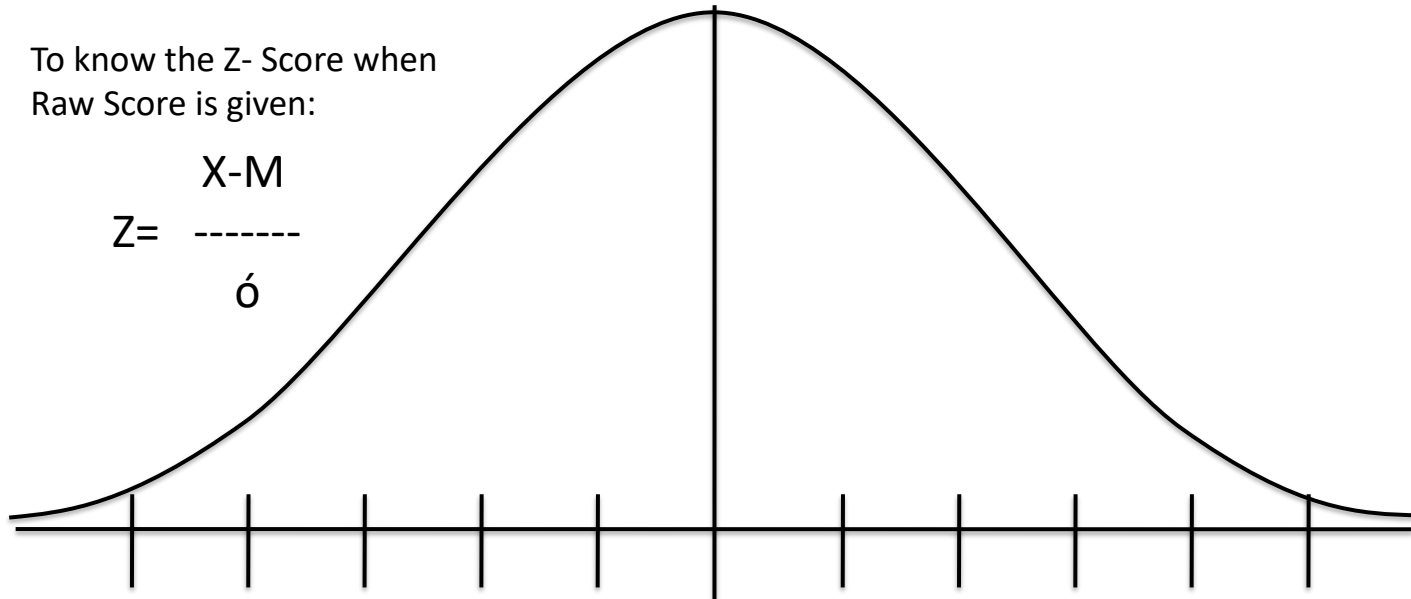
$$X = Z \cdot \sigma + M$$

Z= Value of Z Score  
X= Value of Raw Score  
 $\sigma$ = Standard Deviation  
M= Mean of Score

**If,  $X=90$ ,  $\sigma=15$ ,  $M=75$  then  $Z=?$**

To know the Z- Score when  
Raw Score is given:

$$Z = \frac{X-M}{\sigma}$$



<u>Z-Score</u>	-5 $\sigma$	-4 $\sigma$	-3 $\sigma$	-2 $\sigma$	-1 $\sigma$	0 $\sigma$	+1 $\sigma$	+2 $\sigma$	+3 $\sigma$	+4 $\sigma$	+5 $\sigma$
	0	15	30	45	60	M= 75	90	105	120	135	150

$$Z = \frac{X-M}{\sigma}$$

$$Z = \frac{90-75}{15}$$

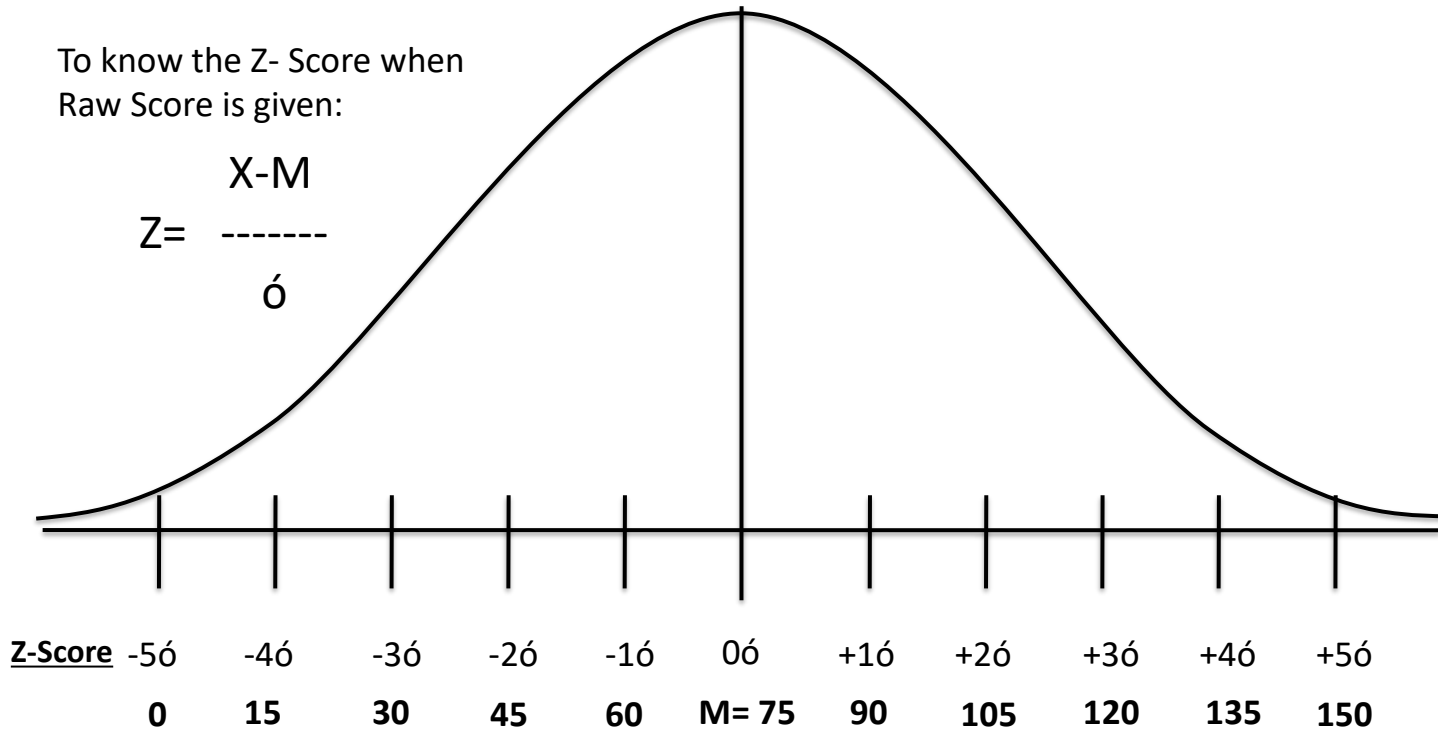
$$Z = \frac{15}{15}$$

$$Z = +1$$

**If,  $X=30$ ,  $\sigma=15$ ,  $M=75$  then  $Z=?$**

To know the Z- Score when  
Raw Score is given:

$$Z = \frac{X-M}{\sigma}$$



$$Z = \frac{X-M}{\sigma}$$

$$Z = \frac{30-75}{15}$$

$$Z = \frac{-45}{15}$$

$$Z = -3$$

**If,  $Z=2$ ,  $\sigma=10$ ,  $M=50$  then  $X=?$**

To know the X- Score when  
Z-Score is given:

$$X = Z \cdot \sigma + M$$

