z-Score

(Definition)

The number of standard deviations an element is away from the mean

$$\text{z-score (z)} = \frac{x - \mu}{\sigma}$$

where x is an element of the data set, μ is the mean of the data set, and σ is the standard deviation of the data set.

Example: Data set A has a mean of 83 and a standard deviation of 9.74. What is the z-score for the element 91 in data set A?

$$z = \frac{91-83}{9.74} = 0.821$$

z-Score
(Graphic)

The number of standard deviations an element is from the mean

$$\text{z-score (z)} = \frac{x - \mu}{\sigma}$$

		34%	34%			
	13.5%			13.5%		
2.35%					2.35%	
μ-3σ	μ-2σ	μ-σ	μ	μ+σ	μ+2σ	μ+3σ
z = -3	z = -2	z = -1	z = 0	z = 1	z = 2	z = 3