

to compute z-score

population formula = $z = \frac{x - \mu}{\sigma}$ μ = population mean

σ = population standard deviation

sample formula = $z = \frac{x - \bar{x}}{SD}$ $\bar{x}$ = sample mean

SD = sample standard deviation

example: 5-pt test

person	X	$x - \bar{x}$	$\frac{x - \bar{x}}{SD} = z$
A	1	$1 - 3 = -2$	$-2 / 1.581 = -1.265$
B	2	$2 - 3 = -1$	$-1 / 1.581 = -0.633$
C	3	$3 - 3 = 0$	$0 / 1.581 = 0$
D	4	$4 - 3 = 1$	$1 / 1.581 = 0.633$
E	5	$5 - 3 = 2$	$2 / 1.581 = 1.265$

$\bar{x} = 3$ $SD = 1.581$

$z = \frac{\text{value of } x - \text{mean}}{SD}$



Preview from Notesale.co.uk
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