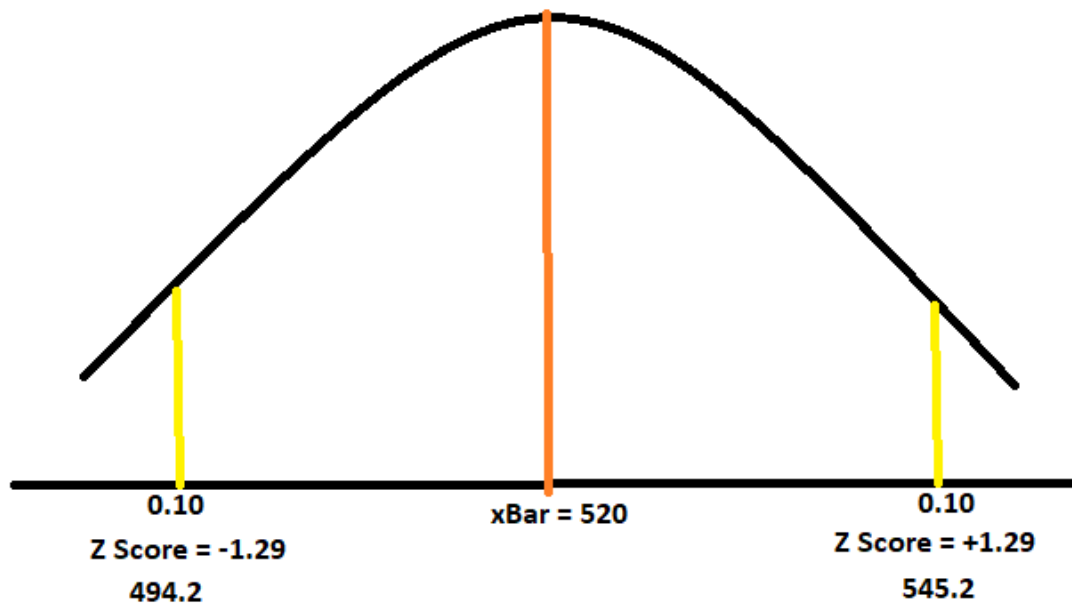


- 1) In the Quant test of CAT exam, the population standard deviation is known to be 100. A sample of 25 test takers has a mean of 520. Construct a 80% CI about the mean.

Answer:

1. Population SD = 100
2. $n=25$
3. $\bar{x}=520$



Point Estimate \pm Margin of error.

Z: $0.2/2 = 0.1$

Hence the Area is 1-0.900

Zscore = 1.29

Lower Fence = $520 - 1.29 \cdot 100/\sqrt{25}$ ($100/5$)

$520 - 1.29 \cdot 5$

494.2

Higher Fence = $520 + 1.29 \cdot 100/\sqrt{25}$ ($100/5$)

$520 + 1.29 \cdot 5$

545.8