PW SKILLS

Problem Statement on Z Score

[Z table]

$X = \{1, 2, 3, 4, 5, 6, 7\}$

$Z\_score = \frac{x_i - \mu}{\sigma}$

$\mu = 4 \quad \sigma = 1$

1 ⇒ Symmetric Distribution

Z_table

Question : What percentage of scores fall above 4.25?

$x_i = 4.25$

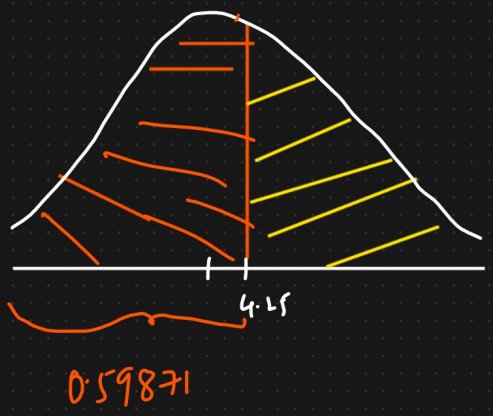
$\mu = 4$

$\sigma = 1$

$Z\_score = \frac{x_i - \mu}{\sigma}$

$= \frac{4.25 - 4}{1} = 0.25 \Rightarrow$ Std

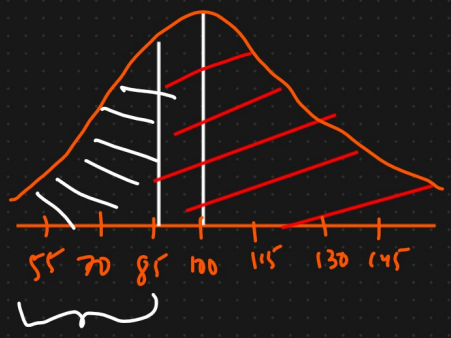
Q) What percentage of scores falls above 4.25?



$1 - 0.59871 = 0.4013 \Rightarrow 40.13\%$

② In India the average IQ is 100, with a standard deviation of 15. What is the percentage of the population would you expect to have an IQ lower than 85?

Ans) $\mu = 100 \quad \sigma = 15$



0.15866 = 15.86 %

① $Z\text{-score} = \frac{x_i - \mu}{\sigma} = \frac{85 - 100}{15} = \boxed{-1}$

② $IQ \geq 85$

$= 1 - 0.15866 = 84.13\%$

$\boxed{75 \geq IQ \leq 100}$ ⇒ Internal Assignment