

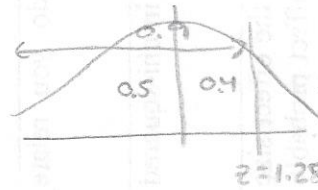
1) $Q = \frac{Q_3 - Q_1}{Q_3 - Q_2} = \frac{5.5 - 3}{50 - 2} = 1.25$

3) $VC = \frac{s}{\bar{x}} \cdot 100 = \frac{1.7}{4.24} \cong 40.09$

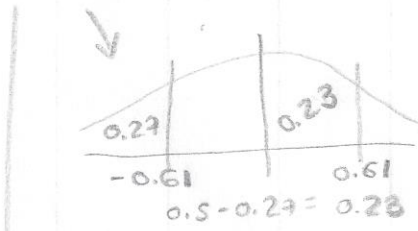
5)

The 90% of the sample is found at $Z = 1.28$ (searching $p = 0.4$)

$\frac{X - \bar{X}}{S} = 1.28; \frac{X - 32}{4} = 1.28; 4 * 1.28 = X - 32; 5.12 = X - 32; X = 37.12$



6) The value of Z in the table is the corresponding one to 0.51, but in negative (searching $p = 0.23$ in the table).

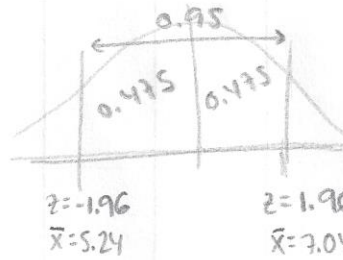


$\mu = 6.14$
 $\sigma = 3.24$
 $n = 49$

7) $\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{3.24}{\sqrt{49}} \cong 0.46$

8) The value of Z_1 is 1.96 (searching $p = 0.475$ in the table), so:

$\frac{\bar{X} - \mu}{\sigma_{\bar{x}}} = 1.96; \frac{\bar{X} - 6.14}{0.46} = 1.96; 0.46 * 1.96 = \bar{X} - 6.14; 0.9 = \bar{X} - 6.14; \bar{X} = 7.04$



$\frac{\bar{X} - \mu}{\sigma_{\bar{x}}} = -1.96; \frac{\bar{X} - 6.14}{0.46} = -1.96; \bar{X} = 5.24$

10)

$\bar{X} = \frac{73.92 + 106.08}{2} = 90$

$Z = \frac{X - \bar{X}}{S}; Z = \frac{100 - 90}{24} \cong 0.42$

→ Searching this z in the table, the correspondent p is 0.1628

→ $0.1628 + 0.5 = 0.6628 \rightarrow 66.28\%$

If 100 students is the 100%, 66.28% is around 66 students.

$100 \text{ --- } 100$
 $x \text{ --- } 66.28$

$x = \frac{66.28 \cdot 100}{100} = 66.28 \cong 66$

