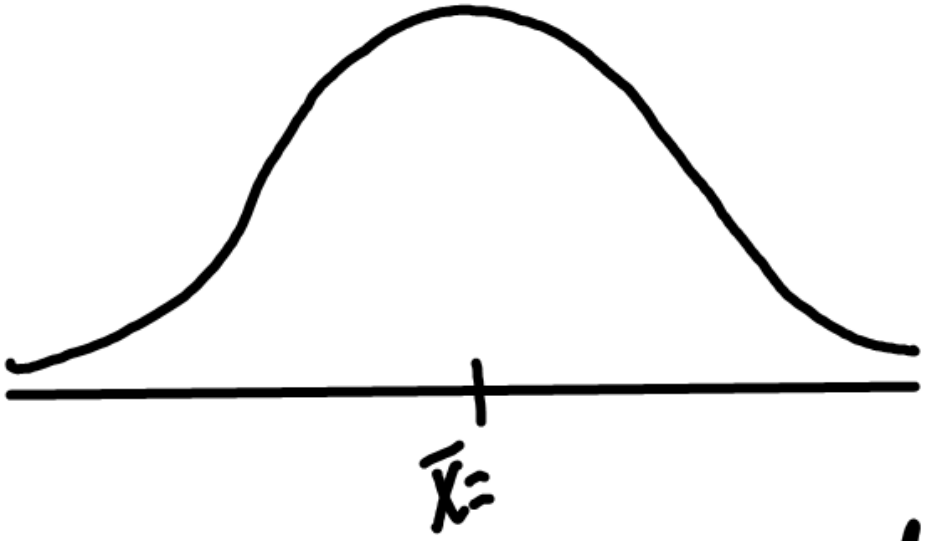
6.3



Sample

$$z = \frac{x - \bar{x}}{s}$$

Population

$$z = \frac{x - \mu}{\sigma}$$

x data value

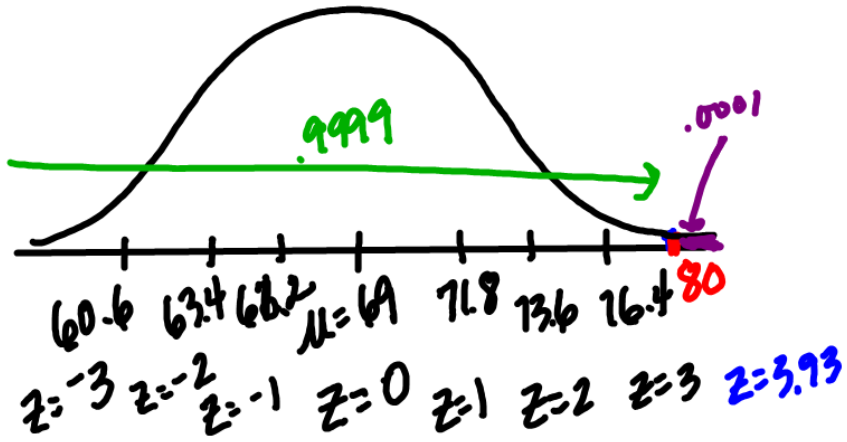
Ex. 1 p265

$\mu = 69$

$\sigma = 2.8$

$$z = \frac{80 - 69}{2.8}$$

$z = 3.93$

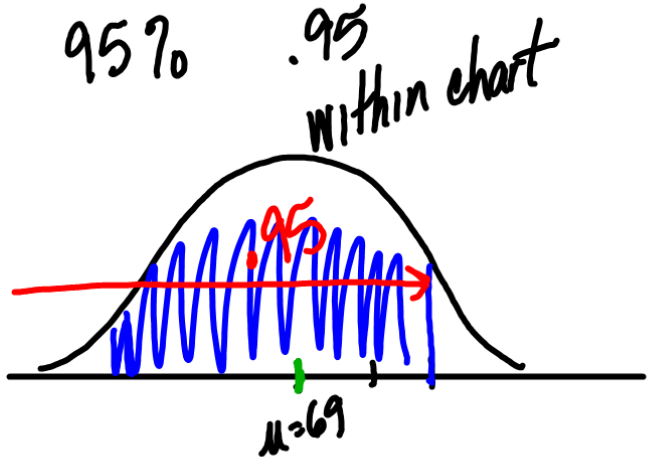


p268

$\mu = 69$

$\sigma = 2.8$

95% .95 within chart



$$z = \frac{x - \mu}{\sigma}$$

2.8 $1.645 = \frac{x - 69}{2.8}$ · 2.8

+69 +69

$4.606 = x - 69$

$73.606 = x$

73.6 in

p273

22. $\mu = 69$

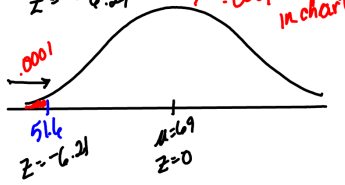
$\sigma = 2.8$

$x = 51.6$

$z = \frac{51.6 - 69}{2.8}$ find z-score

$z = \frac{-17.4}{2.8}$

$z = -6.21$ → .0001 in chart



b. $\mu = 63.6$

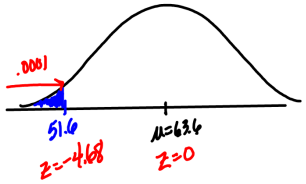
$\sigma = 2.5$

$x = 51.6$

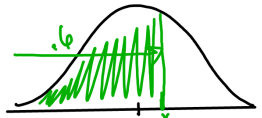
$z = \frac{51.6 - 63.6}{2.5}$

$z = \frac{-11.7}{2.5}$

$z = -4.68$



d=



look up .6 in Chart → z=.25

z=.25

$z = \frac{x - \mu}{\sigma}$

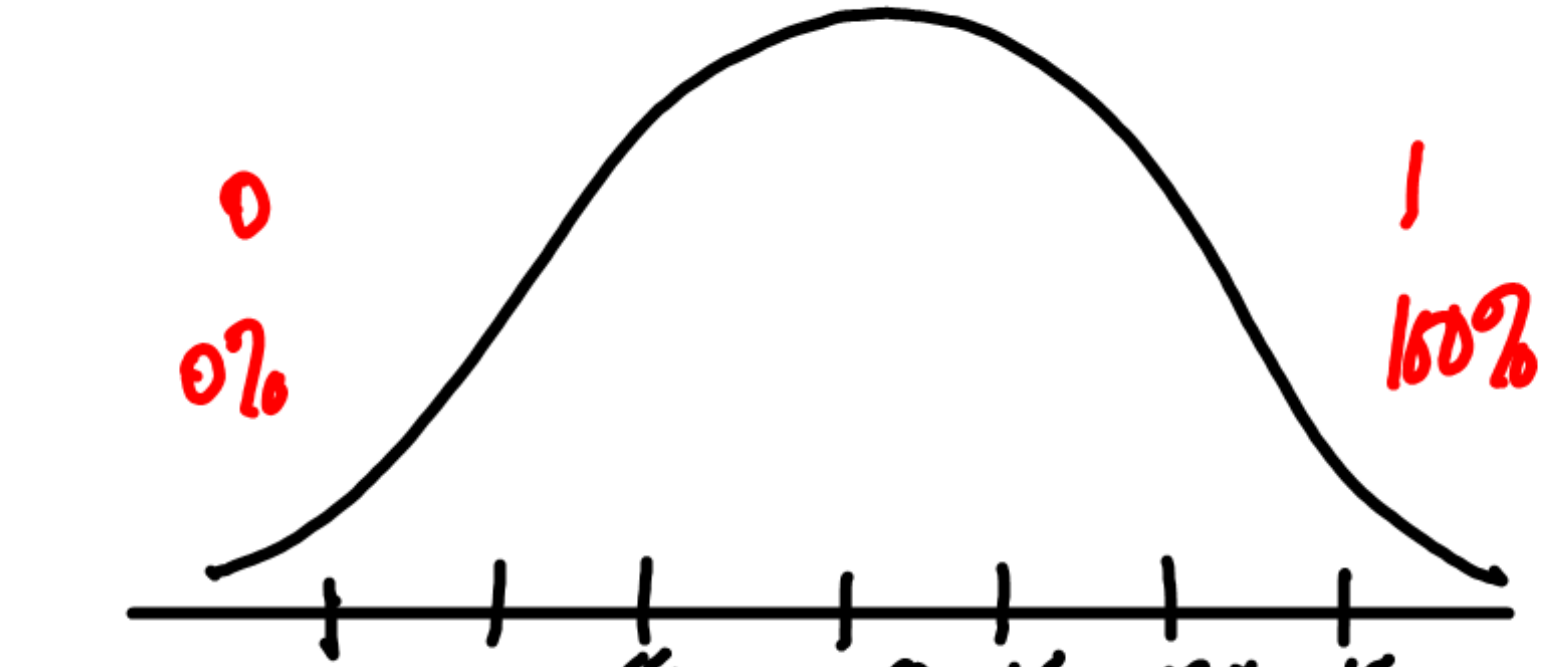
28 $.25 = \frac{x - 69}{2.8}$ · 2.8

$.7 = x - 69$

+69 +69

$69.7 = x$

69.7 in


0
0%
1
100%
IQs
55
70
85
μ = 100
115
130
145
Z-scores
z = -3
z = -2
z = -1
z = 0
z = 1
z = 2
z = 3