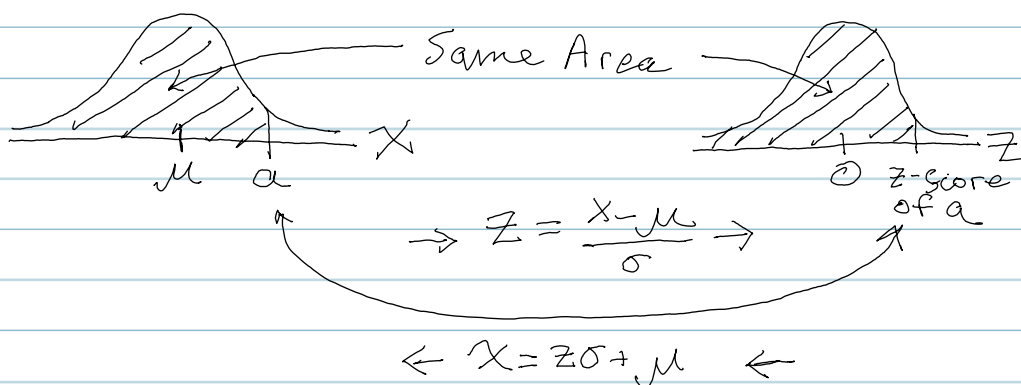


The Non-Standard

Section 6.3 → Normal Distribution



Adult Male Heights :

- Normal in Distribution
- Mean is $\mu = 69"$.
- Std. Dev. is $\sigma = 3"$.

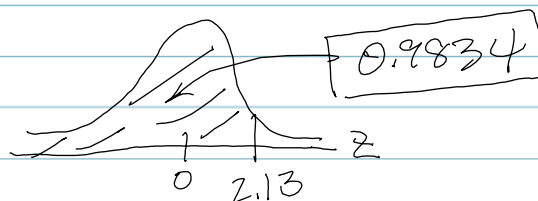
Ex: Pick an adult male height @ random.

1) $P(X \leq 75.4") = P(Z \leq 2.13) = 0.9834$

$\hookrightarrow Z = \frac{X - \mu}{\sigma} = \frac{75.4 - 69}{3} = 2.13$

Table A1

$Z \rightarrow .03$	
$\downarrow$	$\downarrow$
$2.1 \rightarrow$	0.9834



2) $P(X > 66.2") = P(Z > -0.93) = 1 - 0.1762 = 0.8238$

Table A1

$Z \rightarrow .03$	
$\downarrow$	$\downarrow$
$-0.9 \rightarrow$	0.1762

$\hookrightarrow Z = \frac{X - \mu}{\sigma} = \frac{66.2 - 69}{3} \approx -0.93$

