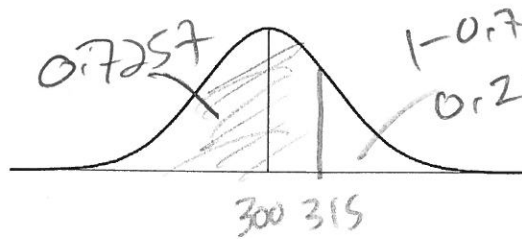


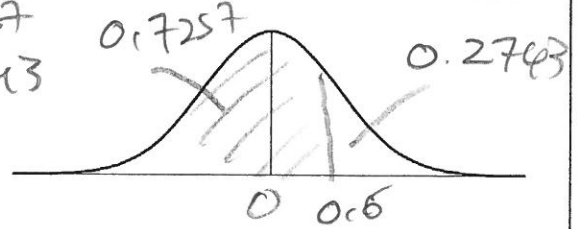
VERSION ①

Given a mean of 300 and standard deviation of 25
Determine $P(x \leq 315)$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale



Related z score and probability

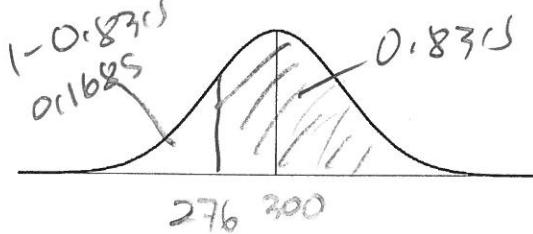
$Z_{315} = 0.6$

$P(x \leq 315) = 0.7257$

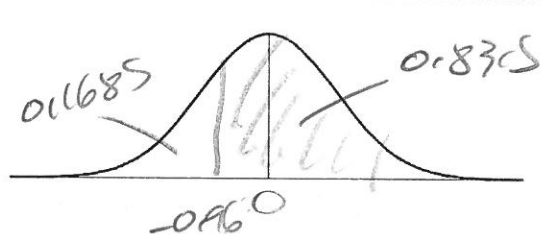
$$\frac{315 - 300}{25} = \frac{15}{25} = 0.6$$

Given a mean of 300 and standard deviation of 25
Determine $P(x \geq 276)$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale



Related z score and probability

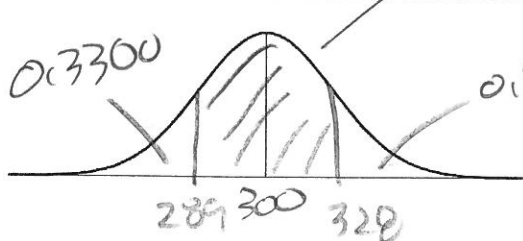
$Z_{276} = -0.96$

$P(x \geq 276) = 0.8315$

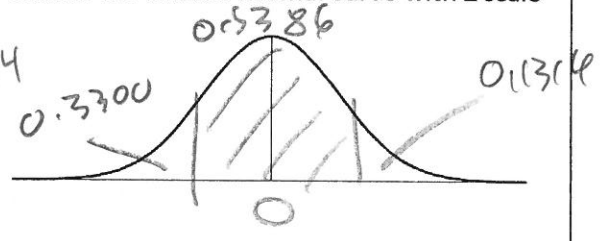
$$\frac{276 - 300}{25} = \frac{-24}{25} = -0.96$$

Given a mean of 300 and standard deviation of 25
Determine $P(289 \leq x \leq 328)$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale



Related z scores and probabilities

$Z_{289} = -0.44$

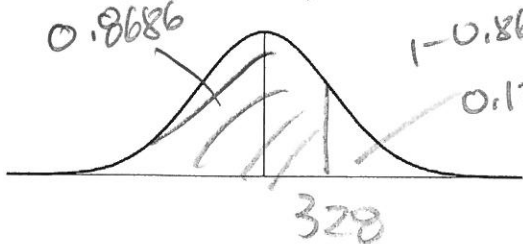
$P(x \leq 289) = 0.3300$

$Z_{328} = 1.12$

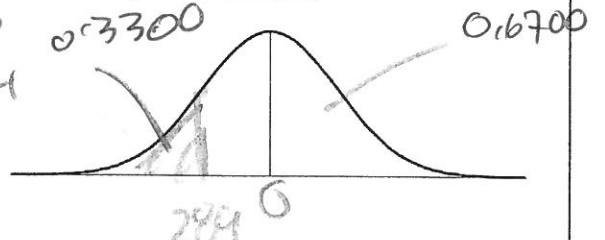
$P(x \leq 328) = 0.8686$

$P(289 \leq x \leq 328) = 0.5386$

These may come in handy



These may come in handy



Show the work for $P(289 \leq x \leq 328)$ here

$$\frac{328 - 300}{25} = \frac{28}{25} = 1.12$$

$$\frac{289 - 300}{25} = \frac{-11}{25} = -0.44$$

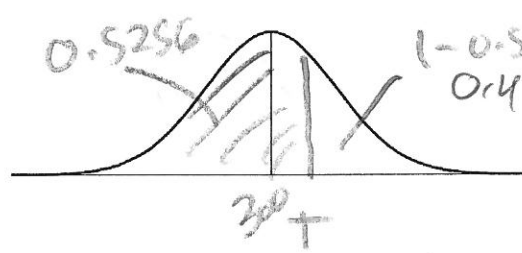
$$0.8686 - 0.3300 = 0.5386$$

$$\frac{289 - 300}{25} = \frac{-11}{25} = -0.44$$

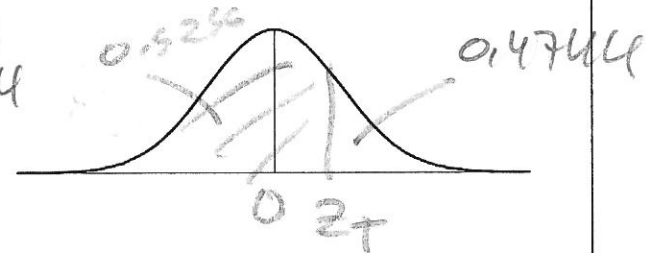
$$0.6700 - 0.3300 = 0.3400$$

Given a mean of 300 and standard deviation of 25. Determine T such that $P(x \leq T) = 0.5256$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale



Related z score and value of T

$Z_T = 0.06$

$T = 301.5$

$P(x \leq T) = 0.5256$

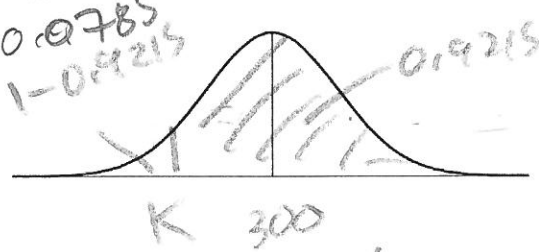
0.5256 → closest to 0.5235
↓
0.06

$0.06 = \frac{T - 300}{25}$

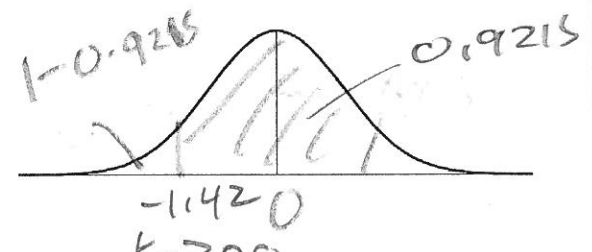
$T = 300 + 25(0.06) =$

Given a mean of 300 and standard deviation of 25. Determine K such that $P(x \geq K) = 0.9215$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale



Related z score and value of K

$Z_K = -1.42$

$K = 264.5$

$P(x \geq K) = 0.9215$

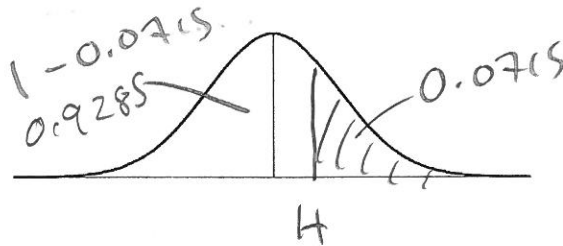
0.9222 closest
-1.42

$-1.42 = \frac{K - 300}{25}$

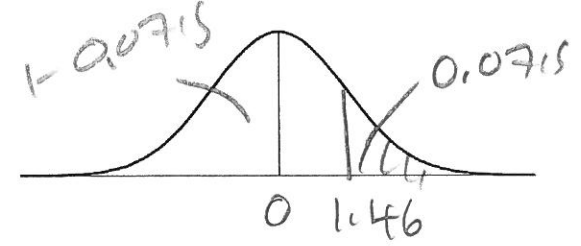
$K = 300 + (25)(-1.42)$

Given a mean of 300 and standard deviation of 25. Determine H such that $P(x \geq H) = 0.0715$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale



Related z score and value of H

$Z_H = 1.46$

$H = 336.5$

$P(x \geq H) = 0.0715$

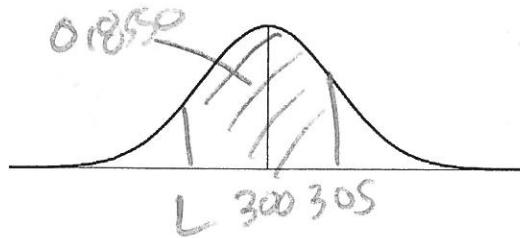
closest 0.9279
↳ 1.46

$1.46 = \frac{H - 300}{25}$

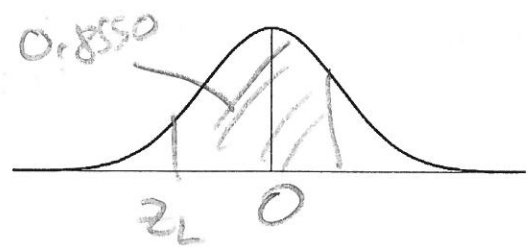
$H = 300 + (25)(1.46)$

Given a mean of 300 and standard deviation of 25. Determine L such that $P(L \leq x \leq 305) = 0.8550$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale

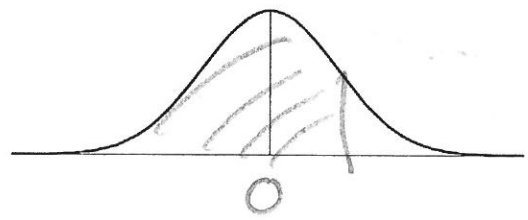
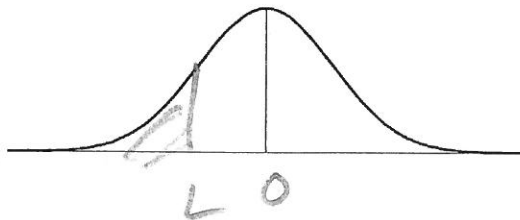


Related z scores and probabilities

These may come in handy

These may come in handy

$Z_{305} = 0.2$



$P(x \leq 305) = 0.5793$

Show the work for $P(L \leq x \leq 305) = 0.8550$ here

$Z_L =$ _____

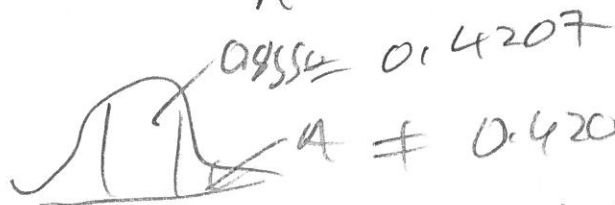
L = impossible

$$\frac{305 - 300}{25} = \frac{5}{25} = 0.2$$

$P(x \leq L) =$ _____



$A = 0.5793$



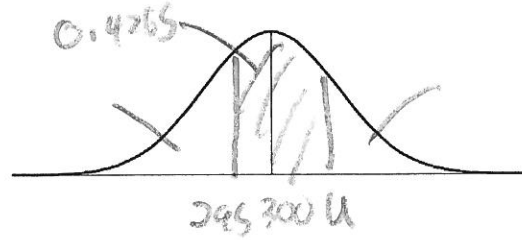
$A = 0.4207$

$A = 0.4207$

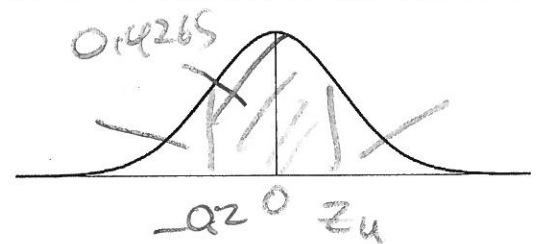
+0.05 = 0.4707?

Given a mean of 300 and standard deviation of 25. Determine L such that $P(295 \leq x \leq U) = 0.4265$

Sketch the related normal curve with X scale



Sketch the related normal curve with Z scale

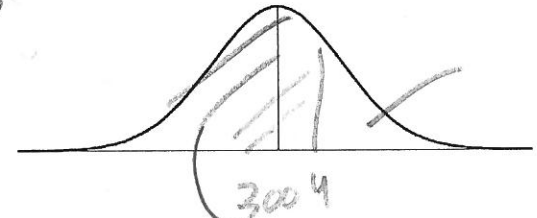
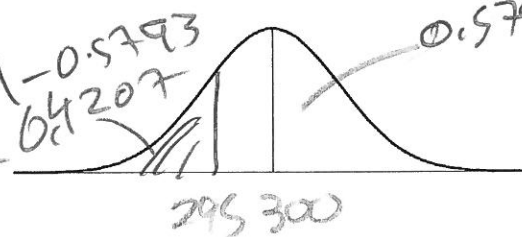


Related z scores and probabilities

These may come in handy

These may come in handy

$$Z_{295} = -0.2$$



$$P(x \leq 295) = 0.4207$$

$$Z_U = 1.02$$

Show the work for $P(295 \leq x \leq U) = 0.4265$ here

$$U = 325.5$$

$$\frac{295 - 300}{25} = \frac{-5}{25} = -0.2$$

$$\begin{aligned} &0.4265 \\ &0.4207 \\ \hline &0.8472 \end{aligned}$$

$$P(x \leq U) = 0.8472$$

look up
0.8461 closest

$$1.02$$

$$-1.02 = \frac{U - 300}{25}$$

$$U = 300 + 25(1.02)$$