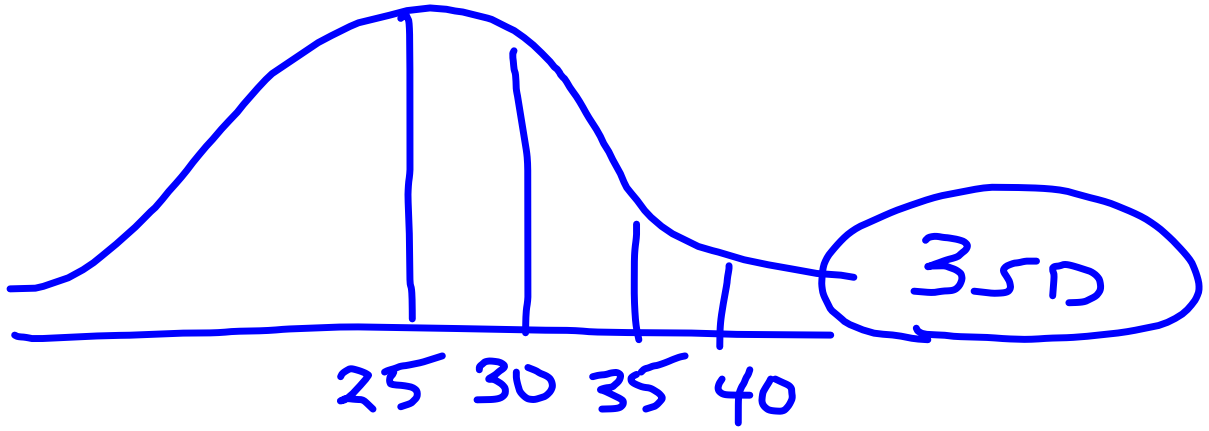


$$Z = \frac{X - \mu}{\sigma}$$

25, 30, 35, 40

Probability is not greater than 1

3. Use Correct Notation

$Z = \frac{X - \mu}{\sigma}$ $N(544, 103)$

$X < 502$

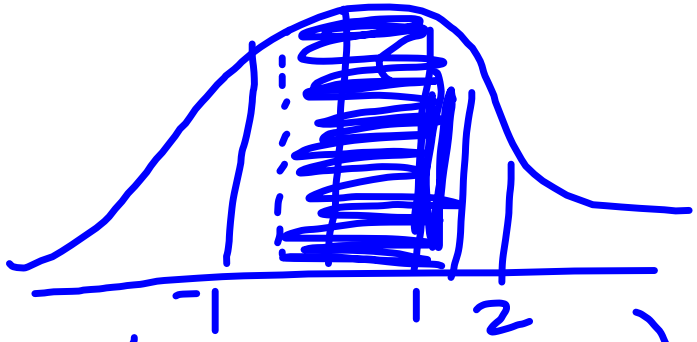
$z = \frac{500 - 544}{103}$

$= -.4272$

$P(X < 500) =$

$P(Z < -.4272) = .3346$

→ Probability is always between 0 & 1



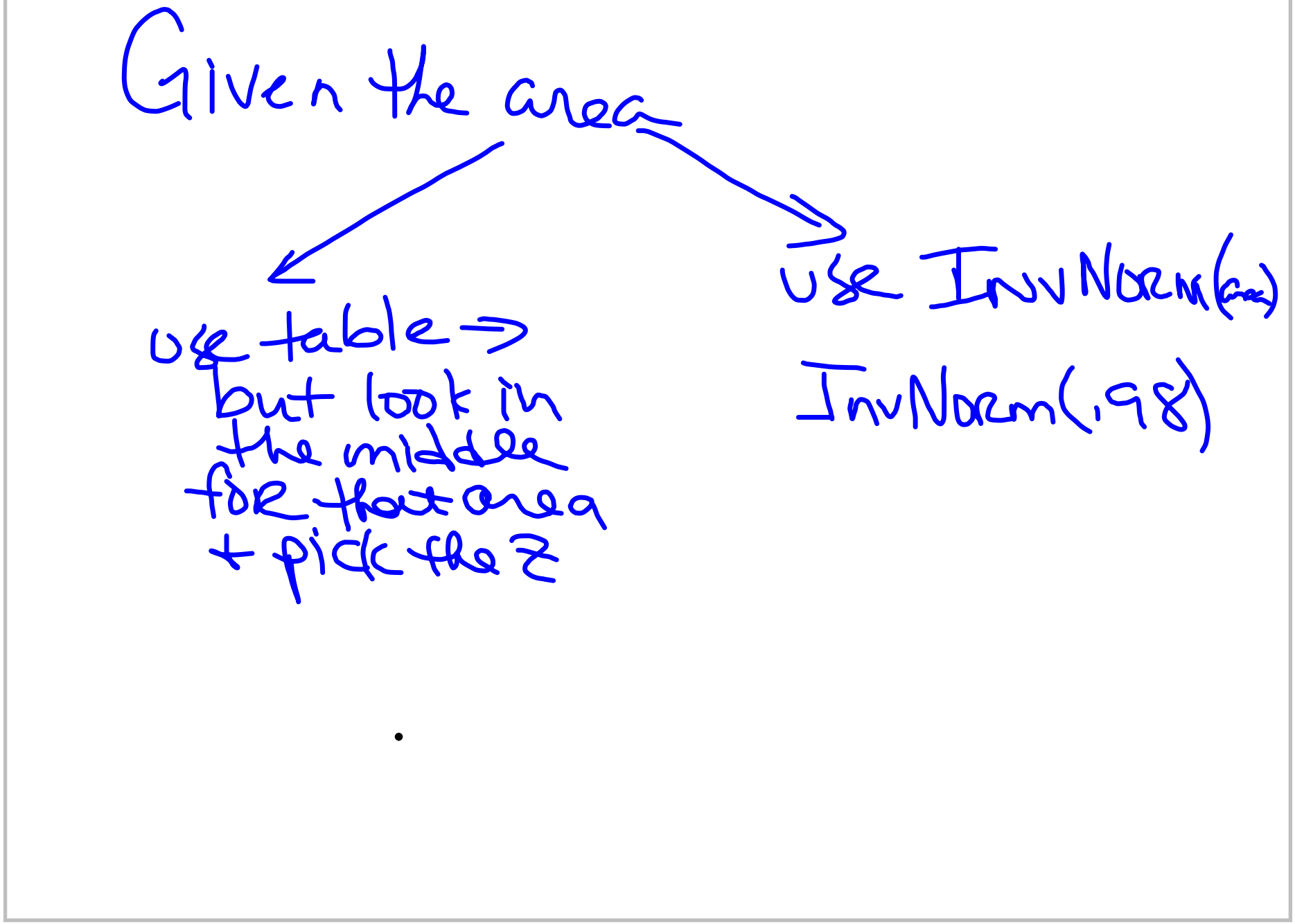
$P(500 < x < 700)$

$= P(-.4272 < x < 1.5146) = .6004$

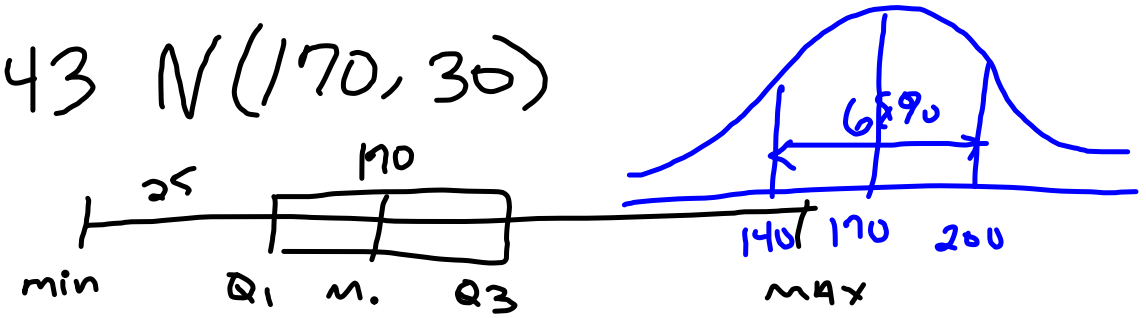
$P(x < 1.5146) = .9345$

$P(x < -.43) = .3336$

$.6009$


Given the area
use table ⇒
but look in
the middle
for that area
+ pick the z
use InvNorm(area)
InvNorm(.98)

2.43 $N(170, 30)$



Quartiles → what % are involves

→ $P(x < \quad) = .25$

$P(x < \quad) = .75$

Find the z that goes w/ each % and use in the z-score formula.

$\text{InvNorm}(.25) = -.6745 = z$

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

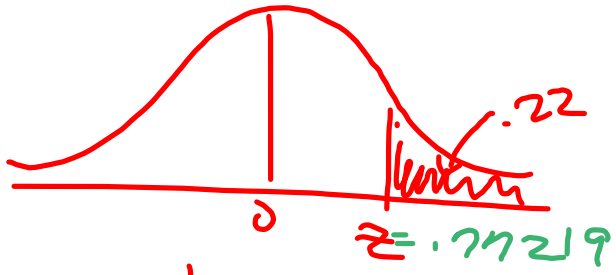
$-.6745 = \frac{x - 170}{30}$

$-20.235 = x - 170$

$149.765 = x$

$Q_1 = 149.765 \text{ mg/dL}$ $Q_3 = 190.235$

2.42 b. Find z such that 22% are greater than z



InvNorm only does area to left
Table only does area to left

When finding area → write z's below
NORMCDF(Left, Right)
or use table + subtract