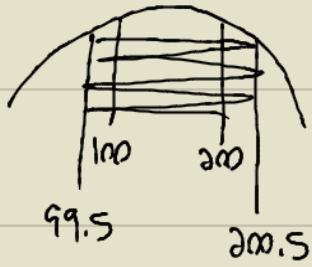


4. $p = .40$ $n = 500$ $P(100 \text{ TO } 200)$



$$N \text{CDF}(99.5, 200.5, 500(.4), \sqrt{500(.4)(1-.4)})$$

$$= \boxed{.5182}$$

BY HAND

① $np(1-p) \geq 10$

$$500(.40)(1-.40) = 120 \quad \checkmark$$

②

$$X = 99.5$$

$$X = 200.5$$

$$Z = \frac{X - np}{\sqrt{np(1-p)}}$$

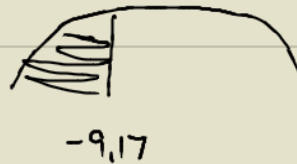
$$Z = \frac{X - np}{\sqrt{np(1-p)}}$$

$$Z = \frac{99.5 - 500(.4)}{\sqrt{500(.4)(1-.4)}}$$

$$Z = \frac{200.5 - 500(.4)}{\sqrt{500(.4)(1-.4)}}$$

$$Z = -9.17$$

$$Z = .05$$



$$.5199$$

$$.0002$$

$$= \boxed{.5197}$$