$P(X < 350) \overset{(?)}{\doteq} P(Z < 350)$

$\sim$ Neg Bin $\quad\quad \sim N(400;40)$

$X \sim \text{neg Bin}($

$E(X) = \frac{80}{0.2} = 40$

$P(X < 350) = \sum_{k=80}^{369} P($

b.1)

$= P(-\infty < Z < 350) = \Phi\left(\frac{350-400}{40}\right) - \Phi(-\infty)$

$= \Phi\left(\frac{-50}{40}\right) + \frac{1}{2} = -\Phi(1.25) + 0{,}5$

$= 0{,}5 - 0{,}3944$

$= 0{,}1056 = 10{,}56\%$

$P(-\infty < X_{1+\ldots} X_{80} < 350) =$

$= P\left(-\infty < \frac{X_{1+\ldots} X_{80} - 80 \cdot 5}{\sqrt{80 \cdot 20}} < \frac{350 - 80 \cdot 5}{\sqrt{80 \cdot 20}}\right)$

$\sim N(0;1)$

$\doteq \Phi\left(\frac{350-400}{40}\right) - \Phi(-\infty)$

$\frac{\sum x}{n}$