Discuss in section 4 #1

p. 59

\( B = \text{(card really is bad)} \)

\( G = \text{not} \ B = \text{(card really is good)} \)

\( \Theta = \text{(system says card is bad)} \)

\( \Theta = \text{not} \ \Theta = \text{(system says card is good)} \)

\( P(B) = 1\% \)

\( P(\Theta | G) = 97\% \)

\( P(\Theta | B) = 98\% \)

\( P(B | \Theta) = \frac{98}{395} \)

\( P(B) = 1\% \)

Prevalence \( = 25\% \)

\( P(B | \Theta) = \frac{98}{395}! \)
Sample the observed people or escalator.

N = ?

(biased)

All British underground rail. 

weight

Like at random without replacement sum $S' = ?$

like i.i.d.

$\bar{S} = \frac{\sum S'}{n} = \frac{30,900}{192} = 160$ lb.

mean $\mu = 158$ lb.

$\sigma = 33$ lb.

like i.i.d.

$\sum S = ?$

$E(S) = n\mu$

$= (192)(158 \text{ lb.})$

$= 30,336 \text{ lb.}$

$P(escalator \text{ overloaded}) = P(\bar{S} > 31,450) = ?$