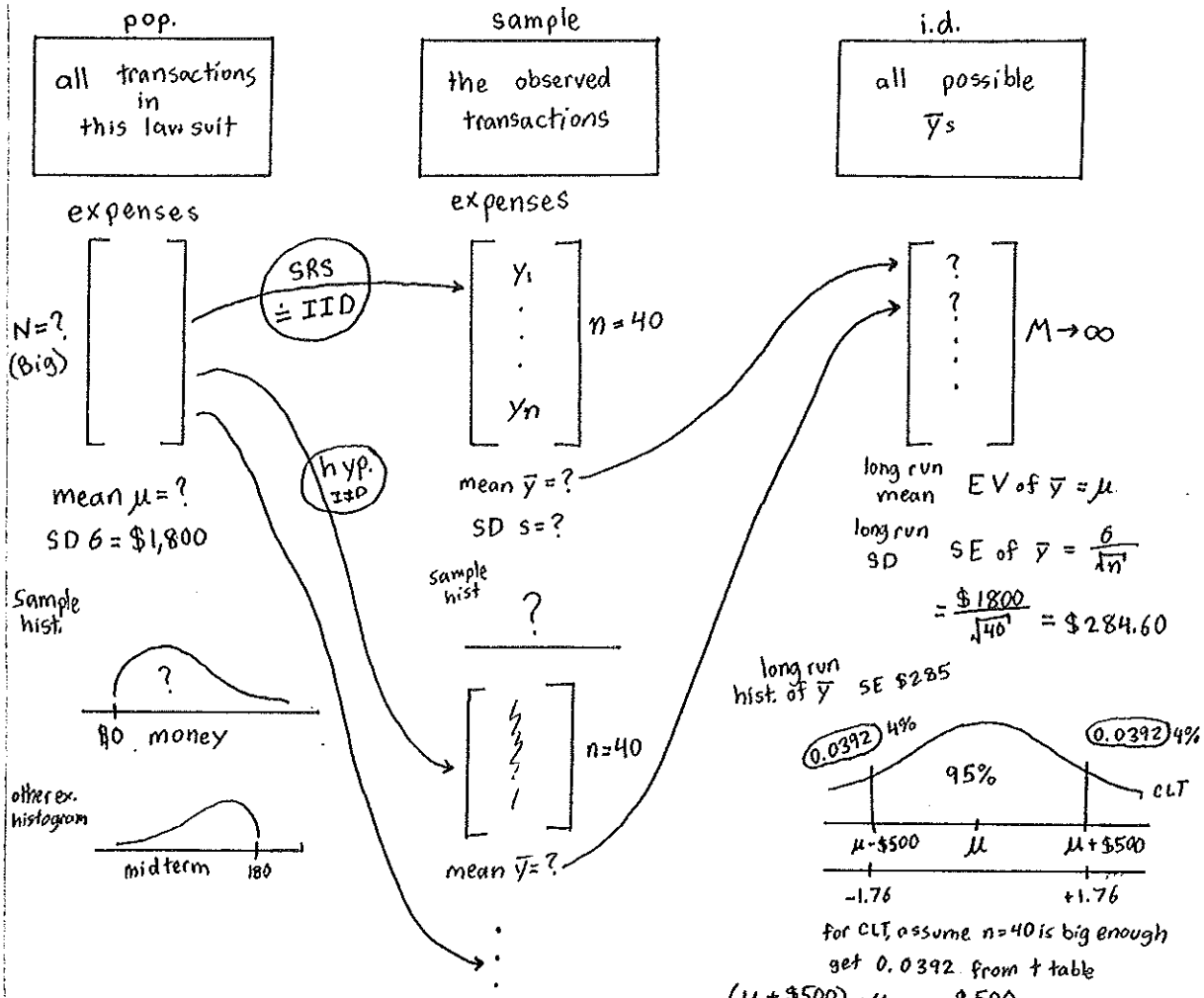
Questions on Discussion Section 5

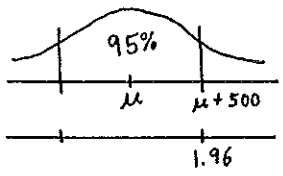
#1.



for CLT, assume n=40 is big enough
get 0.0392 from t table

$$\frac{(\mu + \$500) - \mu}{\$285} = \frac{\$500}{\$285} = 1.754$$

LR hist. of $\bar{y}$ SE $\frac{\$1800}{\sqrt{n}}$

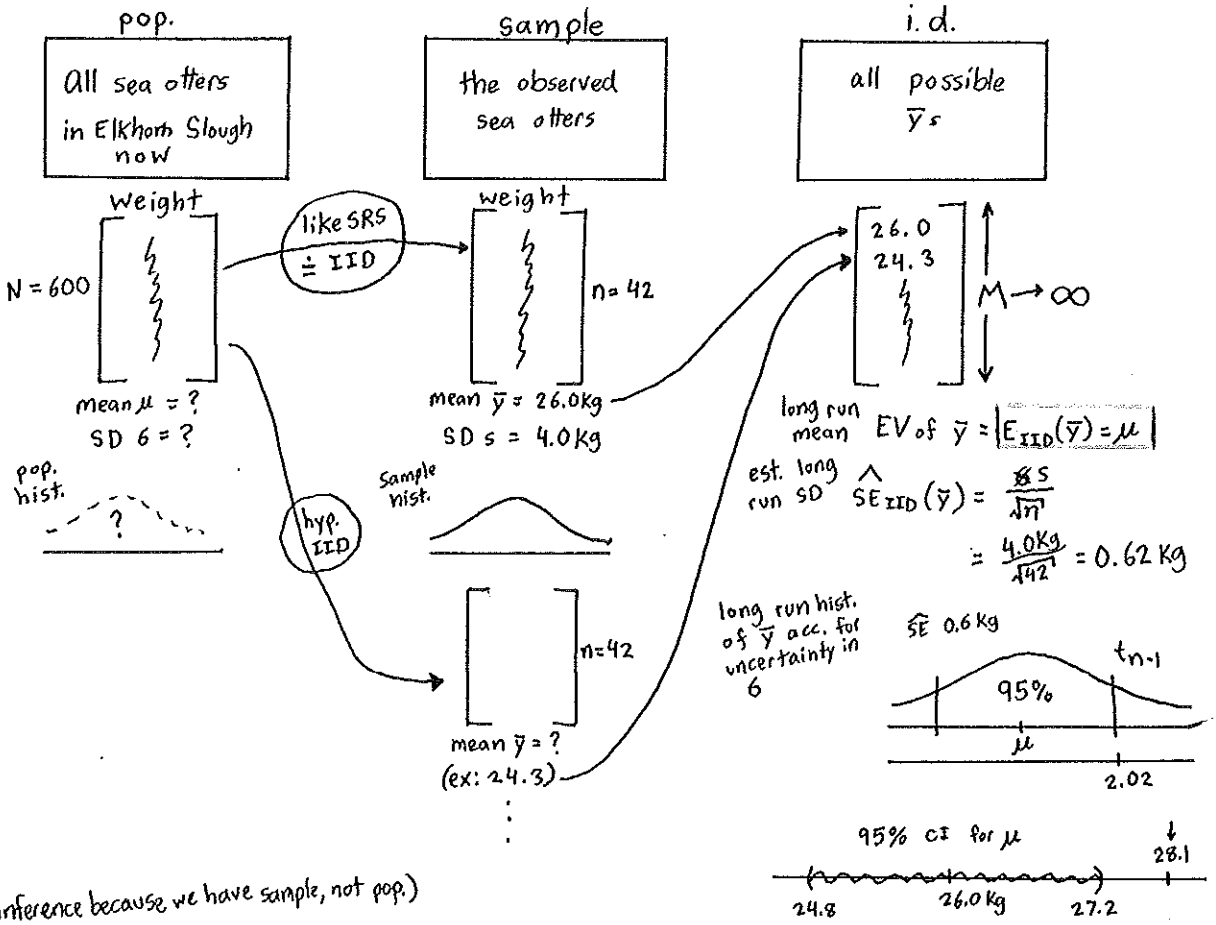


$$= \frac{(\mu + \$500) - \mu}{\frac{\$1,800}{\sqrt{n}}}$$

$$n = \left[\frac{(1.96)(\$1,800)}{\$500}\right]^2 = 49.8 = \boxed{50}$$

Question from Discussion Section 6

#1.



(inference because we have sample, not pop.)

Inf. Summary

(P) unknown pop. quantity of principle (main) interest	μ = pop. mean weight, now
(S) estimate of μ	$\bar{y}$ = 26.0 kg
(ID) give or take for $\bar{y}$ as est. of μ	$\widehat{SE}(\bar{y})$ = 0.6 kg
(ID) 95% CI for μ	$\bar{y} \pm t_{n-1}^{0.95} \widehat{SE}(\bar{y})$ $(t_{41,0.95})(\widehat{SE}(\bar{y}))$

$26.0\,kg \pm \underbrace{(2.02)(0.62\,kg)}_{1.2\,kg}$

pract sig? yes! stat sig? yes!

(6 of or μ
s = give or take in guess for $\bar{y}$)

0.62 = 0.6 true statement, meaning of 0.6
- accounting for unlucky random sampling/error

(a) true

(b) false (not about μ, just about 1 sea otter which is sigma 4.0)

(c) false

(d) true

(e) true