

7.30 pm

# Discussion Section

AMS 7  
5 Nov 09

6 #1

K-75

$$\frac{26.0 - 28.1}{28.1} = -0.075 \quad \textcircled{1}$$

so mean weight now is about

7.5% lower than 5 yrs ago:

this is large in practical terms

## int. summary

unknown pop. summary of interest	$\mu = \text{pop. mean wt. (now)}$ of all 600 others
estimate of $\mu$	$\bar{y} = 26.0 \text{ kg}$
give or take for $\bar{y}$ as est. of $\mu$	$\hat{SE}(\bar{y}) = 0.6 \text{ kg}$
95% interval for $\mu$	$\bar{y} \pm 2.02 \hat{SE} = (26.0 \pm 1.2) \text{ kg}$ (24.8, 27.2)

pop  
all sea otters  
living @ Bk.

sample  
re-observed  
sea otters

imag data  
possible  
 $\bar{y}$

slowly, low w  
wt. (actual)  
like  
s.t.j.  
i.i.d

weight  
h=42  
high  $\bar{y} = 26.0$

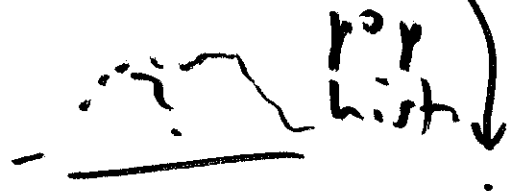
$\begin{pmatrix} 26.0 \\ 25.8 \\ \vdots \end{pmatrix}$   $M = \infty$

mean  $\mu = ?$   
SD  $\sigma = ?$

lowly  
i.i.d  
 $s = 4.0$

h=42

lowly  
var  
mean  
EV of  $\bar{y} = \mu$



weak  $\bar{y} = ?$   
(ex. 25.8)

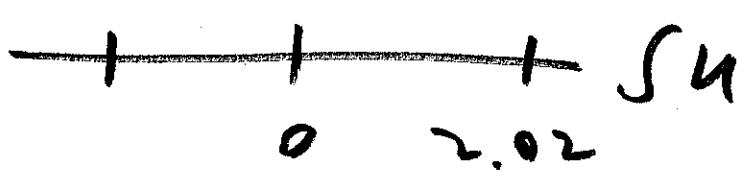
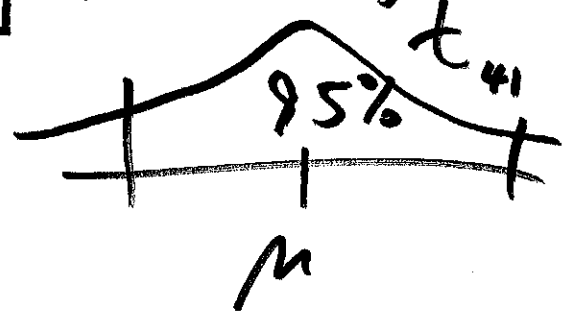
est.  
lowly  
var  
SD  
 $\hat{SE} \cdot f$   
 $\bar{y} = 0.6$

1  $E_{i.i.d}(\bar{y}) = \mu$

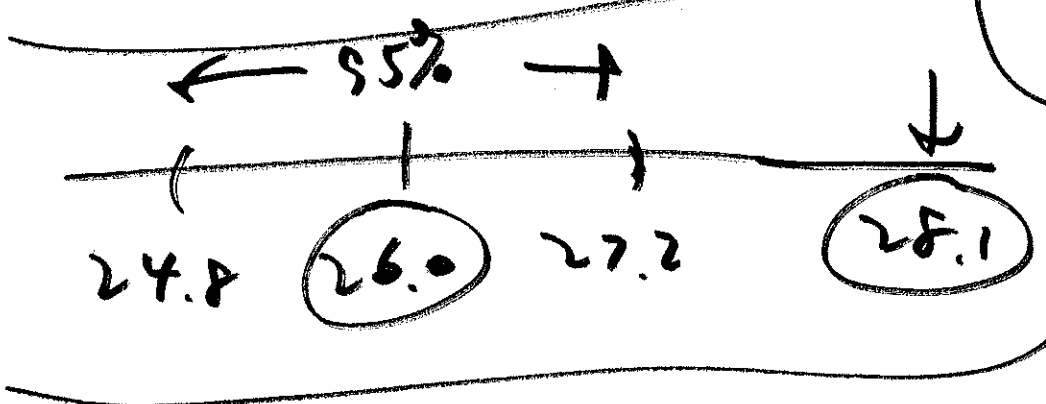
lowly  
var  
hist  
 $\hat{SE} \cdot f$   
3  
 $\mu$

2  $SE_{i.i.d}(\bar{y}) = \frac{\sigma}{\sqrt{n}} = \frac{4.0 \text{ kg}}{\sqrt{42}} = 0.6 \text{ kg}$

3  $\hat{\sigma} = 0.6$  kJ low var list ②  
of  $\bar{y}$  ( $n = 42$ )



df	$t^{.95}$
40	2.021
41	2.02
45	2.014



28.1 is  
not in

95% int., so diff (28.1 vs. 26.0)

① stat sig = ① large in stat.  
terms = ① hard to attribute  
to unlucky sampling = ①  
(probably) real

(19) T (see above)

(b) This statement <sup>is</sup>

is about pop dataset & it's about

the offers in pop, one by one,

not about pop. mean

this

statement is F; to convert

it: by empirical rule we

expect <sup>about</sup> 95% of wts. of

offers <sup>n</sup> in pop to be in

range  $\mu \pm 2\sigma$ , which is

about  $26.0 \pm 2(4)$  kg

(c) is about sample dataset<sup>⑤</sup>  
& about offers in sample one  
by one, not sample mean

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(c) is (F) for some reason  
as (b) & is fixed in exactly  
some way:  $26.0 \pm 2 \frac{(\cancel{0.6})}{4}$

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(d) T (see interval above)

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(e) T (see above) 2.

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