HW7
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These are the solutions in blue to at least 60% of the problems for chapter 7.
Also this is for just section 7.1 and 7.2 .
Everything that is not in blue is part of my notes.

Problem 7.15

	t* values	Confidence
part a	2.1450	95.00%
part b	2.0600	95.00%
part c	1.7080	90.00%

part d The confidence greatly affects the t* value also a lower confidence value means a lower t* value.

Problem 7.18

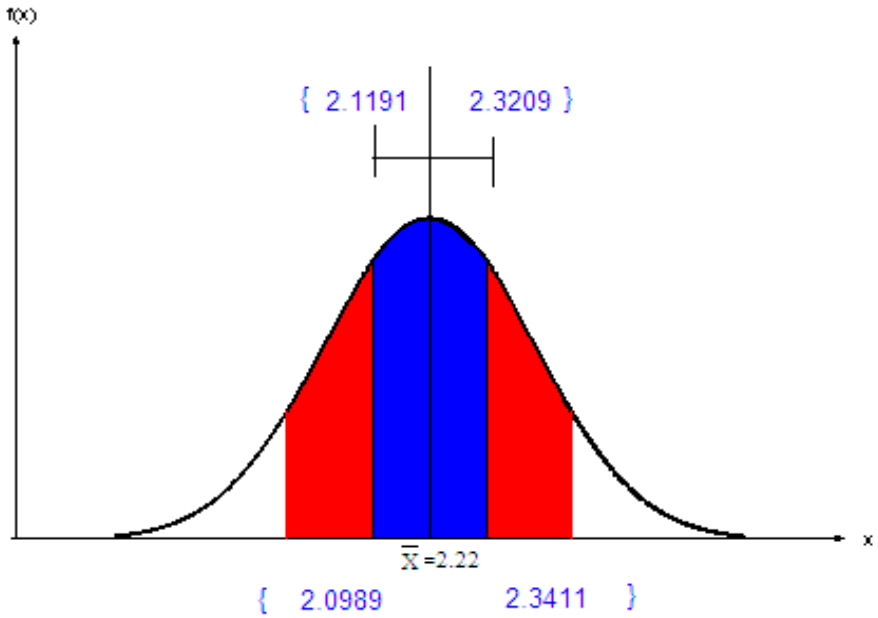
The P-value is less than 0.04 .

Problem 7.31

N=282 Mean=2.22 SD=1.03

confidence	t*
90.00%	1.6450
95.00%	1.9750

t*	margin of error t*(s/n^0.5)			
1.6450	0.1009	{	2.3209	2.1191 }
1.9750	0.1211	{	2.3411	2.0989 }



Problem 7.31 (continued)

The blue region corresponds to a 90% confidence region, and the red region corresponds to 95% confidence region (which is inclusive of the blue region). This means that a greater confidence corresponds to a larger range of where the value may actually be found. This means as the confidence goes up so does the width of the interval.

Problem 7.33

Mean=328 SD=256 N=16 T*=2.131 95% Confid.

part a

t=(x-u)/(s/n^0.5)

5.13 P<0.001 since t is 5.13

part b

136.38

{ 464.38 191.62 }

Problem 7.37

normal range is 2.6 to 4.8

Mean>?4.8

6 clinic visits

data series is 5.6. 5.1, 4.6, 4.8, 5.7, 6.4

mean is 5.37 SD is 0.6653

5.37 0.6653

No, this is not good evidence that the sample mean falls above 4.8 .

5.6
5.1
4.6
4.8
5.7
6.4

Ha is that the mean falls above 4.8 and Ho is that the mean is 4.8 or less.

P=0.046

Problem 7.61

	Females n=71		Males n=37	
	x	SD	x	SD
Total Choles.	173.7	34.79	171.81	33.24
LDL	96.38	29.78	109.44	31.05
HDL	61.62	13.75	46.7	7.94

part a

Yes, it is appropriate to take a two sample t procedure to analyze this data. A simple reason is I have two n values in this case.

part b

Ho is when male u1=u2 and the alternative is when they do not equal one another.

part c

t=((x1-x2)-(u1-u2))/((s1^2/n1)+(s2^2/n2))

Females n=71 Df=70

Males n=37 Df=36

so u1=u2

0.2760 which is the test statistic for 70, and 36 degrees

Values of around 0.72 are the right range for the P-values.

part d

1.89 is the difference between the two means.

t* for 95% confidence is 1.95,

ME is 1.95*(((D103^2)/71)+((F103^2)/37))^0.5

13.36

15.25

11.47

So 13.36 + 1.89 is 15.25 and 13.36 – 1.89 is 11.47 .

The interval is between 15.25 and 11.47 and the significance is 0.2760 .

part e

I think the results can not generalized so well since the sample set is too small to use a z-test and there may also be hidden variables we are not taking into account.

Problem 7.67		I would need to know the standard deviation, the mean, and set of people that this study was done over. Yes, a confidence interval would provide additional useful information since from that I could determine how likely that this information is significant.
Problem 7.69		
	part a	This should test u1 and u2 not x1 and x2.
	part b	This type of comparison can not be done since one is a set of the other.
	part c	That is not the right confidence for a P-value of 0.93 to reject Ho.
	part d	The P-value should be -0.025 and not 0.02 .

2.1-2.5	Problem 7.21		
		part a	The degrees of freedom for t are 23 .
T=2.4		part b	t=(x-u)/(s/n^0.5)
Err:510			

0.2760
0.78
0.72

-11.75 to 15.53
-12.1 to 15.9

13.64
1.9