Chapter 6.c - The "Normal" Model

1) Hand in IT #5
2) Recovering from Homecoming - First Test
3) Notes 6.c : Normal Model
4) Using the 68-95.99.7 Rule
5) Assignment Time [Given Last Week??]

Is it Normal?
-and what does it "mean" if it is

Model
-"a sample of how we believe the data will behave"
-it is not really what is happening

Normal Model $N(\mu, \sigma)$
-appropriate for data distributions that are unimodal and "roughly symmetric"
-defined by PARAMETERS mean $\mu$ and standard deviation $\sigma$

don't confuse STATISTICS mean $\overline{y}$ and standard deviation $s$
[summaries of data]

Check that your data is unimodal and "roughly symmetric" before you use...
The 68 - 95 - 99.7 Rule

*in a Normal Model*

- 68% of the data is within 1 SD to each side of the mean
- 95% of the data is within 2 SD to each side of the mean
- 99.7% of the data is within 3 SD to each side of the mean

[almost all]

REMEMBER: These are based on the Normal Model, not data

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Sketch Normal models using the 68-95-99.7 Rule:

- Birth weights of babies, N(7.6 lb, 1.3 lb)
- ACT scores at a certain college, N(21.2, 4.4)
Assignment (Due Wednesday 9/30)

1) Read Chapter 6, Pg. 107-110

2) Pg. 129a, #7, 9, 11, 12, 14, 16
   Pg. 129b, #1, 3, 5, 6, 18, 19, 20, 22

3) Read Chapter 6, Pg. 111-112

Tomorrow..... Your IT #4 is due!