<u>Day 7 KEY</u>
<u>Margin of Error Classwork</u>
1. Find the margin of error for a survey of 100 American teens. $\pm\,10\%$
2. Compare that margin of error to the margin of error of 900 teens. $\pm\,3.3\%$
3. Find the margin of error for a survey of 9,000 teens. $\pm\,1.1\%$
4. Find the margin of error for a survey of 90,000 teens. $\pm\,0.3\%$
5. What sample size is needed to ensure a Margin or Error that is no more than $\pm2.5\%$?
    1600
6. What would you do to a sample size to cut the margin of error in half?
    Make the sample size 4 times the original sample size.
7. A recent survey of math students at PCHS had a margin of error of 8%, how many students took the survey? 157 math students
8. Draw a conclusion about the margin of error based on the size of the sample. Comparing the results of 2 and 3, the sample size must be 10 times as large to reduce margin of error from 3.3% to 1.1%. This would likely be very expensive.

<u>Margin of Error Practice Homework</u>
1. 1112
2. 62500
3. 3907
4. 370
5. 14873
6. 6250000
7. 193
8. 4445
9. ±0.046
10. ±0.020
11. ±0.032
12. ±0.012
13. ±0.029
14. ±0.013
15. ±0.007
16. ±0.035
17a. ±0.037
17b. 0.14 ± 0.037 = 0.103 to 0.177