NAME ______ PER _____

Don't forget to check conditions every time you use the Normal model to approximate a sampling distribution!

AP STATISTICS

PART V REVIEW #3

- (Ch 18) A box of Raspberry Crunch cereal contains a mean of 13 ounces with a standard deviation of 0.5 ounces. The distribution of the contents of cereal boxes is approximately Normal.
 - a. What is the probability that a case of 12 cereal boxes contains a total of more than 160 ounces?

- b. This problem told us that the distribution of the contents was approximately Normal. Why did we need to know this for this problem? Under what circumstances would this information not be important?
- 2. (Ch 22) A random sample of 150 men found that 88 of the men exercise regularly, while a random sample of 200 women found that 130 of the women exercise regularly.
 - a. Based on the results, construct and interpret a 95% confidence interval for the difference in the proportions of women and men who exercise regularly.

b. A friend says that she believes that a higher proportion of women than men exercise regularly. Does your confidence interval support this conclusion? Explain.

 (Ch 19) A recent Gallup poll found that 28% of U.S. teens aged 13-17 have a computer with internet access in their rooms. The poll was based on a random sample of 1028 teens and reported a margin of error of ±3%. What level of confidence did Gallup use for this poll?

 (Ch 20) Do more than 50% of all U.S. adults feel they get enough sleep? According to Gallup's December 2004 Lifestyle poll, 55% of U.S. adults said that they get enough sleep. The poll was based on a random sample of 1003 U.S. adults. Perform an appropriate hypothesis test to answer this question.

5. (Ch 21) Describe Type I and Type II error in the context of question #20 above.