**How to use 68 - 95 - 99.7% Rule to estimate percentiles &probabilities (Ch. 5)**

A. Definitions & Formulas:

* 68 – 95 – 99.7% Rule:

B. Assumptions & Conditions:

C. Example Problem: On the driving range, Tiger Woods practices his swing with a particular club by hitting many, many balls. Suppose that when Tiger hits his driver, the distance the ball travels follows a Normal distribution with mean 304 yd and standard deviation 8 yd. Use the 68 – 95 – 99.7% Rule to answer the following questions.

i. Write the shorthand notation for this Normal distribution.

ii. Sketch the distribution below. Be sure to label the mean, as well as 1, 2, and 3 standard deviations above and below the mean on the horizontal axis.

iii. What percent of Tiger’s drives are between 288 and 320 yards? Explain or show work.

iv. What is the probability that Tiger’s drive is between 296 and 304 yards? Explain or show work.

v. What percent of Tiger’s drives are greater than 312 yards? Explain or show work.

D. Calculator Steps/TI Tips:

E. Tricks, tips and other things to remember (student notes):