check answers for reminder and #1-2:

| 4.01 | 10.56 | 34 | 47.5 | 54.67 | 68 | 68 | 95 | 95 | 95 | 95.99 | 97.10 | 99.7 | 99.7 | 99.7 |

Reminder from 14.6 notes, Normal Distribution:

The Empirical Rule states that about

____% of the data is within **one** standard
   deviation of the mean.

____% of the data is within **two** standard
   deviations of the mean.

____% of the data is within **three** standard
   deviations of the mean.

1. The **mean** of a set of normally distributed data is **75** and the **standard deviation is 8**. Sketch a graph of the situation.

State your answer to parts a-c by referring to the graph. No work to show!

a. What percent of the data is in the interval **67-83**?

b. What percent of the data is in the interval **59-91**?

c. What percent of the data is in the interval **51-99**?

2. The **mean** of a set of normally distributed data is **128** and the **standard deviation is 4**. Sketch a graph of the situation.

State answer to parts a-b by referring to graph. No work!

a. What percent of the data is in the interval **116-140**?

b. What percent of the data is in the interval **120-136**?

Refer to the graph, then show work for parts c-d .

c. What percent of the data is in the interval **128-136**?

d. What percent of the data is in the interval **124-128**?

Use a calculator to solve e - h, write notation that you use.

e. What percent of the data is in the interval **125-131**?

f. What percent of the data is in the interval **118-136**?

g. What percent of the data is **above 133**?

h. What percent of the data is **below 121**?

i. What percent of the data is **above 121**?
   No calculator command, show work using answer from part h.

3. Enter these quiz scores into a calculator: 14, 18, 16, 20, 22, 18, 19, 20, 25, 18, 16, 18

   a. State the five-number summary.

   b. Sketch a box-and-whisker plot.

14   16   18   20   22   24   26

4. Enter the following values into a calculator and sort.

8   23   11   34   35   12   15   47   51   61   56   48
12   35   62   49   47   28   44   68   35   42   53

   a. Complete the frequency table, then sketch a histogram.
   b. Create a stem-and-leaf plot.
   c. State the mean, median, mode, and standard deviation.

check answers #3-4

14   17   17.49   18   20
25   35   38.09   42
1   2   3   3   4   4   6

interval	frequency
0-10	
10-20	
20-30	
30-40	
40-50	
50-60	
60-70	

stem	leaf

key:

5. A pair of number cubes is thrown. Find the probability that
the numbers match (doubles) **given** that their sum is greater than 8.

$$P(\qquad | \qquad) =$$

6. A pair of number cubes is thrown. Find the probability that their
sum is greater than 8 **given** that the numbers match.

$$P(\qquad | \qquad) =$$

	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

7. **Write a calculator command** using binompdf or binomcdf, then state answer as a percent for the following conditions: A weather report is forecasting a 60% chance of rain for the next 3 days.

a. What is the probability of it raining <u>exactly</u> 2 of the next three days?

b. What is the probability of it raining <u>at least</u> 2 of the next three days?

c. What is the probability of it raining <u>no more than</u> 2 of the next three days?

check answers#5-14

$$\frac{1}{3} \quad \frac{1}{5} \quad \frac{1}{12} \quad \frac{2}{13}$$

$$\frac{5}{6} \quad \frac{270}{1001} \quad 1320 \quad 1680$$

17.62%   25.17%

43.2% 64.8% 78.4%

mutually exclusive

not mutually exclusive

8. **Write a calculator command using binompdf or binomcdf, then state answer as a percent for the following conditions:** An unannounced quiz has 20 true-false questions and you are not prepared for it.

a. What is the probability of randomly guessing and getting <u>exactly</u> 10 questions correct?

b. What is the probability of randomly guessing and answering <u>at least</u> 12 questions correctly so you can earn a passing score?

9. Using a standard deck of playing cards, **how many** 5-card hands are possible that have 3 face cards <u>and</u> 2 aces?

10. A bag contains 4 yellow and 10 red markers. Four markers are drawn at random without replacement. What is the **probability** of drawing 2 yellow markers and 2 red markers?

11. **How many** different ways can the letters in the word *lollipop* be arranged?

12. A **single** number cube is rolled twice. Find the **probability** of rolling a 6 on the first toss <u>and</u> an odd number on the second toss.

State if each event is ***mutually exclusive*** or ***NOT mutually exclusive,*** then solve for

13. the probability of selecting a card from a standard deck and it is a king <u>or</u> an ace.

14. the probability of tossing two number cubes and getting a sum greater than 6 <u>or</u> an even sum.