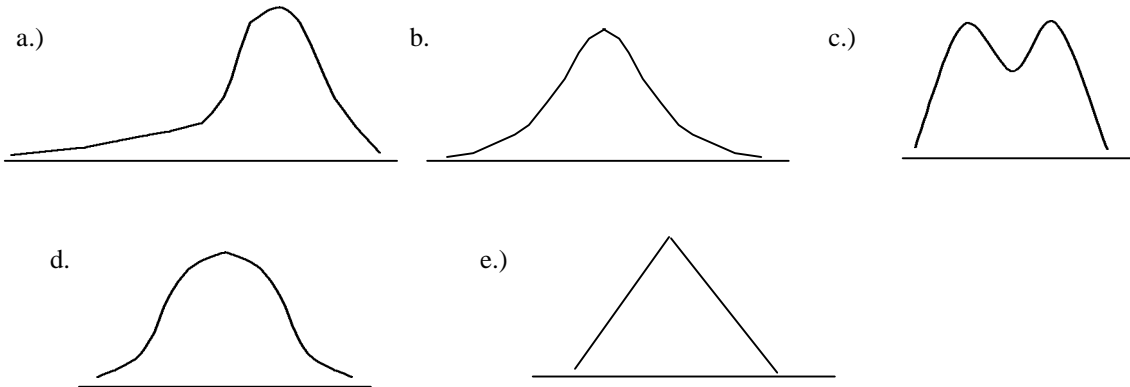


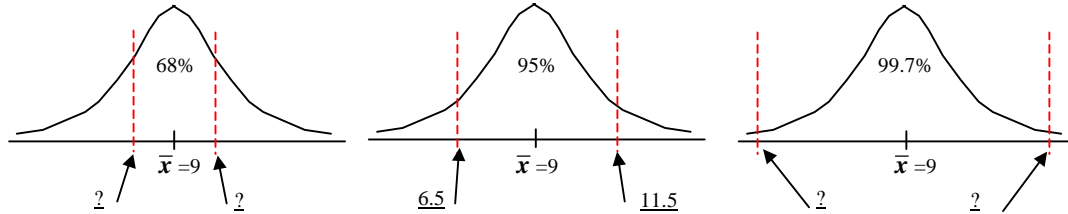
## Statistics

### Quiz 2 – Normal Curves

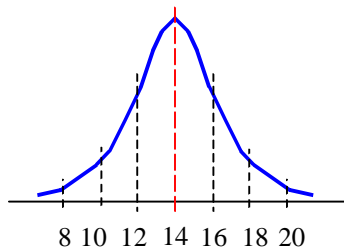
1.) Which of the following distributions are not normal distributions? Circle all that apply.



2.) A group of data that is normally distributed has a mean of 9 and a standard deviation of 1.25. Label the upper and lower boundary values where you would expect to find 68% of the data, 95% of the data, and 99.7% of the data. The 95% interval has been done for you.



3.) Determine the **mean** and **standard deviation** for the following normal distribution:



$\bar{x}$  = \_\_\_\_\_

$s$  = \_\_\_\_\_

4.) Refer to the distribution in Problem 3 to answer the following questions:

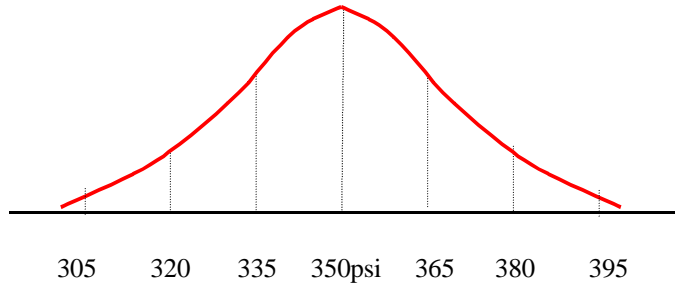
- a) 68% of the data in the distribution, is found between the lower boundary of \_\_\_\_\_ and the upper boundary of \_\_\_\_\_.
- b) 95% of the data in the distribution, is found between the lower boundary of \_\_\_\_\_ and the upper boundary of \_\_\_\_\_.
- c) 99.7% of the data in the distribution, is found between the lower boundary of \_\_\_\_\_ and the upper boundary of \_\_\_\_\_.

5.) Make a quick sketch of a normal distribution with a *small standard deviation*. On the same drawing make a normal distribution with a *large standard deviation*.

**Statistics**  
Quiz 2 – Normal Curves

6.) Refer to the diagram below to answer the following questions:

Results from Pressure Test  
on Corrugated Cardboard  
*150 samples tested*



The numbers shown on this scale refer to resistance-to-puncture strength of the cardboard.

- a.) The product tested in this example is \_\_\_\_\_.
- b.) How many samples were tested? \_\_\_\_\_
- c.) The *mean* resistance-to-puncture strength is \_\_\_\_\_ psi (*pounds per square inch*)
- d.) The *standard deviation* for this set of data is \_\_\_\_\_ psi. (*nearest tenth*)
- e.) 68% of the sample pieces tested had puncture strengths between \_\_\_\_\_ psi and \_\_\_\_\_ psi. This represents \_\_\_\_\_ pieces of cardboard.
- f.) *What percent* of all the tested samples had puncture strengths greater than 380 psi?