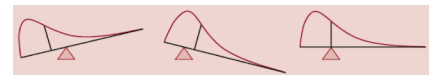
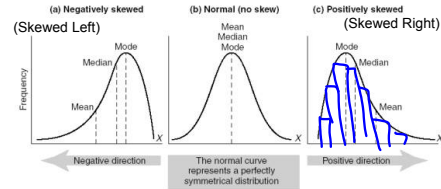


7.1: Introduction to the Normal Curve

Learning Targets:

- I understand the similarities between a histogram and a density curve
- I can recognize a normal density curve.
- I can identify the mean and median of a density curve.
- I can draw a normal curve.
- I understand the empirical rule.
- I can find percentages using the normal curve and the empirical rule.

Different Types of Density Curves



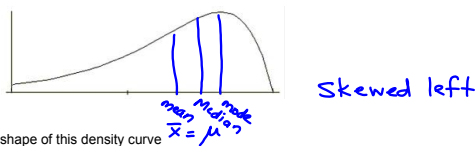
The mean is the balance point if the density curve were made of solid material

The density curve represents 100% of the data.

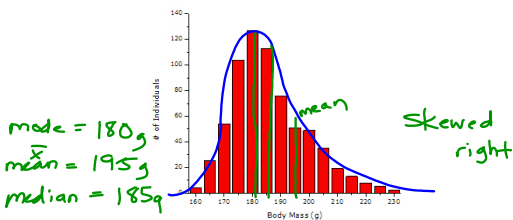
The area under any density curve is always equal to 1

Jan 31-11:30 AM

Feb 1-2:02 PM

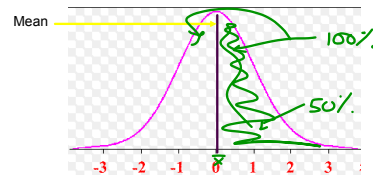


- Describe the shape of this density curve
- Draw a line to indicate where the mean, median and mode are on this graph



Estimate the mean, median, and mode of this data

Properties of the Normal Distribution:

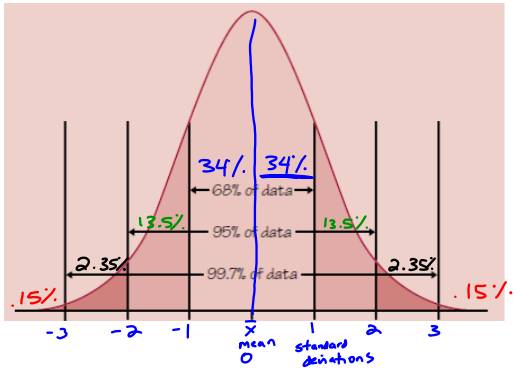


- Not skewed (symmetrical) (bell-shaped)
- Centers around the mean
- Amount of data to the right of mean = amount of data to the left of mean
- (Mean, Median & Mode at the same point)
- Numbers along the bottom = standard deviations (distance from the mean)

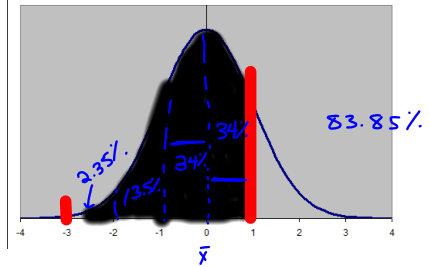
Feb 1-1:58 PM

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The Empirical Rule (68-95-99.7 Rule)

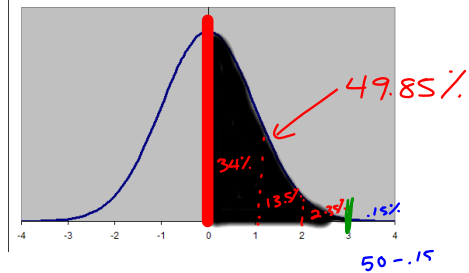
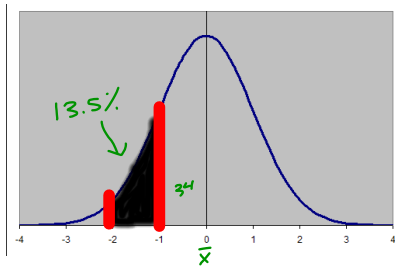


What percent of the normal curve is shaded?



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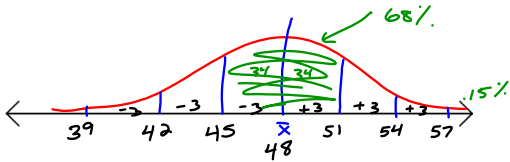
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Feb 1-5:36 PM

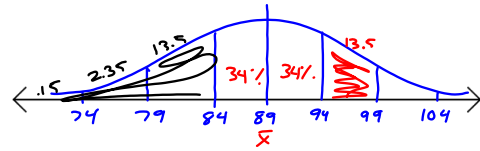
Feb 1-5:38 PM

Draw a normal curve with a mean of 48 and a standard deviation of 3



Feb 1-5:39 PM

Draw a normal curve with mean of 89 and standard deviation of 5



What % of the data falls between 94 and 99?

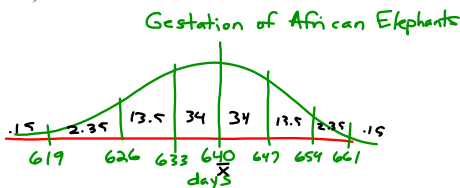
13.5%

What % of the data is less than 84?

16%

Feb 1-5:43 PM

The gestation of African elephants is normal with a mean of 640 days and a standard deviation of 7 days.
(Draw a picture.)



1. What % of pregnancies last between 633 and 647 days?
68%
2. What % of pregnancies last more than 640 days?
50%
3. What % of pregnancies last more than 654 days?
2.5%
4. What % of pregnancies last for less than 619 days?
15%

Feb 1-5:51 PM

Section 7.1

Worksheet — Homework

p. 302 #1-10 (draw a picture), 13, 15

→ Due before you leave today

Feb 10-11:48 AM