

**Directions: Complete each problem appropriately. Show work for the necessary problems.**

1.) Find the measures of central tendency for following data set: 15 , 13 , 9 , 9 , 7 , 1 , 11 , 10 , 13 , 1 , 13 , 8 , 14.	2.) Find the measures of central tendency for following data set: 100 , 77 , 82 , 69 , 84 , 70 , 100 , 93 , 80 , 82 , 83 , 78 , 70 , 82 , 89 , 97 , 71 , 83 , 93 , 87 , 83	3.) Complete following sentences with the word ALWAYS, SOMETIMES, or NEVER:  a.) A set of data _____ has one and only one median.  b.) A set of data _____ has one and only one mean.  c.) A set of data _____ has one and only one mode.																				
4.) Find the range and interquartile range for following set of data: 44 , 45 , 38 , 8 , 40 , 35 , 10 , 55 , 23 , 96	5.) Using the data set: 20 , 16 , 18 , 14 , 9 , 20 , 16 a.) Find the mean and std dev. b.) What percent of data falls within 1 std dev from the mean?	6.) Find the variance for following set of data: 9 , 8 , 10 , 9 , 8 , 5.																				
7.) What are the minimum and maximum (after factoring in any outliers) of following set of data: 24, 28 , 10 , 26 , 35 , 30 , 31 , 29?	8.) Find the outlier boundaries for following set of data: 55 , 63 , 91 , 51 , 78 , 45 , 48 , 76 , 99 , 99	9.) Make a stem-leaf plot of following set of data: <table><tr><td>79</td><td>80</td><td>80</td><td>80</td><td>74</td></tr><tr><td>80</td><td>80</td><td>79</td><td>64</td><td>78</td></tr><tr><td>73</td><td>78</td><td>74</td><td>45</td><td>81</td></tr><tr><td>48</td><td>80</td><td>82</td><td>82</td><td>70</td></tr></table>	79	80	80	80	74	80	80	79	64	78	73	78	74	45	81	48	80	82	82	70
79	80	80	80	74																		
80	80	79	64	78																		
73	78	74	45	81																		
48	80	82	82	70																		
10.) Make a box-and-whisker plot of following set of data: 24 , 18 , 29 , 21 , 16 , 23 , 13 , 11 *Make sure you check for outliers*	11.) Make a box-and-whisker plot of following set of data: 74 , 72 , 35 , 80 , 70 , 71 , 72 , 94 , 75 , 77. *Make sure you check for outliers*																					

12.) A forest products company claims that the amount of usable lumber in its harvested trees averages 172 cubic feet and has a standard deviation of 12.4 cubic feet. Assume that these amounts have approximately a normal distribution.

a.) What percent of trees contain more than 159.6 ft<sup>3</sup>?

b.) What percent of trees will yield less than 147.2 ft<sup>3</sup>?

c.) If 12,000 trees are usable, how many trees yield between 134.8 and 196.8 ft<sup>3</sup>?

13.) The scores on an exam are normally distributed with a mean of 77 and a standard deviation of 10. What percent of the scores are greater than 87?

14.) The number of cookies in a shipment of bags are normally distributed with a mean of 57 and a standard deviation of 4. There are normally 500 bags of cookies in a shipment. How many bags of cookies will contain between 49 and 65 cookies?

15.) Brenda's Bountiful Chocolate Bon-Bons are packaged in small bags. The weight of the bags are normally distributed with an average weight of 7 ounces and a standard deviation of 0.3 ounces. During a routine check, 8 of the bags had weights of more than 7.6 ounces. How many bon-bons were sampled?

16.) Although skim milk has as much calcium as whole milk, only 33% of 2406 adults surveyed in SHAPE magazine said skim milk is a good source of calcium. What is the margin of error for this survey?

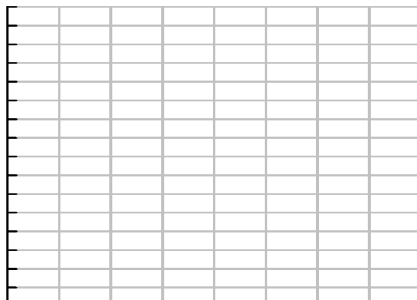
17.) A grocery store chain contacted a random group of customers who spent an average of at least \$100 on a weekly basis: 83% said they were "somewhat satisfied" with their store's service. The margin of error was 4.5%. How many customers were contacted by the researchers?

18.) In a survey of U.S. citizens aged 65 and over, 399 people were asked about their participation in activities at their local Senior Citizen Center. The margin of error was 5%. How many said they participated in the survey?

19.) A select group of 40 students were surveyed concerning their movie preferences. The table below shows the data that was collected:

Type	Comedy	Romance	Drama	Action
Percent	35%	20%	30%	15%

Make a bar graph that shows the data's FREQUENCY and not percent.



20.) Jared surveyed 50 of his classmates on their favorite color. Below are his survey results. Make a pie chart.

Orange	Yellow	Red	Blue	Totals
15	20	5	10	<b>Total # = 50</b>
				<b>Total % = 100%</b>
				<b>Total Deg = 360°</b>

