Name _			
Element	tary	Statis	tics

Date \_\_\_\_\_

Period

## <u>Chapter 3 Final Exam Review</u> Statistics for Describing, Exploring, & Comparing Data

## Match the symbol with the correct statistical calculation:

1. Q <sub>1</sub>	a. sample mean
2. σ	b. population variance
3. <i>x</i>	c. sample standard deviation
4. s <sup>2</sup>	d. population mean
5. <i>µ</i>	e. first quartile
6. med	f. sample variance
7. s	g. population standard deviation
8. σ <sup>2</sup>	h. median

\_\_\_\_ 9. Which of the following measures of center is most affected by outliers?

a. mode b. mean c. median

\_\_\_\_\_ 10. If a set of data is normally distributed, the minimum and maximum "usual" values are within how many standard deviations of the mean?

a. one b. two c. three

- 11. The amount of Steve's monthly phone bill is normally distributed with a mean of \$85 and a standard deviation of \$13. Use the empirical rule (or the 68-95-99.7 rule) to find the percentage of her phone bills that are between \$72 and \$98.
  - a. 95% b. 99.9% c. 68% d. 99.7%

12. Suzie scored at the 95<sup>th</sup> percentile on her math test last week. Her friend thought that meant Suzie got a 95% on the test. Explain why her friend was wrong.

13. An athlete ran the 100 meter sprint in 15.7 seconds at a school where the mean time for the 100 meter sprint is 16.5 seconds and the standard deviation is 1.8 seconds. Find the z-score and use that to determine whether the value is unusual (a score is unusual if its z-score is less than -2.00 or greater than 2.00). If necessary, round the z-score to the nearest hundredth.

14. Use the following sample of ground temperature readings from Death Valley (in °F) to find the correct measures of center and variation. If necessary, round to the nearest hundredths place.

146	152	168	174	180	178	179	180	178	178	168	165	152	144
	a. Fi	nd the	mean:										
	b. Fi	nd the	median	:									
	c. Fi	nd the	mode(s	:):									
	d. Fi	nd the	midran	ge:									
	e. Fi	nd the	range:										
	f. Fi	nd the	standa	rd devi	ation:								

g. Find the variance:

15. The following data represents the average number of hits per game for a college baseball team last season.

19.2 19.2 20.0 18.4 17.9 17.3 15.2 17.3 17.8 19.1

- a. Find the percentile rank of having 19 hits per game.
- b. Find the number of hits at the 45<sup>th</sup> percentile.
- c. Find the z-score of having 18 hits per game.
- d. Give the 5-number summary for the number of hits per game.
- e. Construct a boxplot for the given number of hits per game.

15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5
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