NAME: SOLUTIONS

QUIZ 2 (February 1, 2017)

Statistics for Social Science (201-401-DW)
Instructor: Emilie Richer

Instructions:

- You have **20 minutes** to complete the quiz
- No books, cell phones or other communication devices are permitted
- You must show all of your work in order to be credited with full marks
- Anyone suspected of cheating will be asked to leave
- This test is marked out of **10 marks**

[QUESTION 1] (5 MARKS)
Give a definition (in words) of the z-score then state the formula for computing the z-score.

THE Z-SCORE INDICATES HOW MANY STANDARD DEVIATIONS A VALUE IS FROM THE MEAN. THE FORMULA IS THE FOLLOWING $Z = \frac{X - \mu}{\sigma}$

[QUESTION 2] (5 MARK)
Complete the following table:

Population Parameter vs. Sample statistic

		Population parameters	Sample statistic
Computed using individuals from:		all THE INDIVIDUALS from a POPULATION UNDER STUDY	a sample from WITHIN a population
Symbol used:	Mean	μ	$\bar{x}$
	standard deviation	σ	s
Formula for standard deviation:		$\sigma = \sqrt{\frac{\sum (x_i - \mu)^2}{N}}$ WHERE N IS POPULATION SIZE	$s = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}}$ WHERE n IS SAMPLE SIZE
Usually known or unknown?		UNKNOWN	KNOWN