Math 10 2019 Winter **Name: Last** Yellow **First** Key

Quiz Chapter 1 Form A **Circle your regular class time 11: 30 12:30**

1 point deducted if you do not circle the class time

Questions 1 - 3 refer to the following;

A statistics instructor was interested in the amount of time De Anza College Math 10 students spent studying Statistics during the week of the second midterm exam. She surveyed a sample of De Anza College Math 10 students to find out how long they studied statistics during the week of the second midterm exam.

1. [3 *points*] Identify the type of data as qualitative, quantitative discrete, or quantitative continuous

   a) Amount of time a student studied

   quantitative continuous

   b) Whether a student used the textbook in print or as an ebook

   qualitative

2. [3 *points*] In parts (a) and (b), fill in the blank by selecting from the following choices:

   population **parameter** **sample** **statistic** **variable** **data**

   a) The sample produces an average study time of 10.7 hours. 10.7 hours is an example of statistic

   b) Minh studied 9.6 hours that week. 9.6 hours is an example of data

3. [4.5 *points*] For each situation below, fill in the appropriate sampling method from the list shown:

   cluster stratified systematic simple random convenience

   a) 12 students were randomly selected from each Fall 2018 Math 10 class.

   Sampling Method: stratified

   b) The sample was obtained by using randomly selected student ID numbers to select students from a list of all students enrolled in Fall 2018 Math 10 classes.

   Sampling Method: simple random sample

   c) The sample was selected by randomly selecting eight Fall 2018 Math 10 classes and including every student in each of the eight selected classes.

   Sampling Method: cluster

Key Form A Yellow

4. A sample of 40 houses being sold were examined to find out how many bedrooms each house had. The data are summarized in the table below:

X = number of bedrooms	Frequency (number of houses)	Relative Frequency	Cumulative Relative Frequency	
1	2	2/40 = .05	.05	
2	5	5/40 = .125 (b)	.175 (d)	← .05 + .125
3	12	12/40 = .30	.475 (c)	← .175 + .30
4	? 16 (a)	16/40 = .40	.875	← .475 + .40
5	4	4/40 = .10	.975	← .875 + .10
6	1	1/40 = .025	1.0	← .975 + .025

Complete the table as needed to answer the questions below.
You are graded on your answers to the questions, not by the numbers you write in the table.

a. [1 *point*] **How many** houses had **exactly 4 bedrooms**?

2+5+12+4+1 = 24 40 − 24 = **16 houses**

b. [1 *point*] What is the relative frequency for 2 bedroom houses? (*Answer to 3 decimal places*)

5/40 = **.125**

c. [1.5 *points*] What is the cumulative relative frequency for 3 bedroom houses? (*Answer to 3 decimal places*)

.05 + .125 + .30 = **.475**

d. [1.5 *points*] What **percent** of houses had **at most 2** bedrooms? (*Answer to a tenth of a percent*)

17.5% cumulative relative frequency for 2 bedrooms

e. [1.5 *points*] What **percent** of houses had **at least 4** bedrooms? (*Answer to a tenth of a percent*)

52.5% $\frac{16+4+1}{40} = \frac{21}{40} = .525$ OR $1 - .475 = .525$

5. [3 *points*] A medical clinic administrator is interested in the recovery times for all patients who visited the clinic for treatment of a sports injury. The clinic administrator selects a sample of its patients who have visited the clinic for a sports injury and reviews their records. **Identify the following:**

a. The VARIABLE is:

A. Average recovery time for all patients who visited the clinic for a sports injury parameter
(B.) The recovery time for a patient who visited the clinic for a sports injury variable
C. List of recovery times for individual patients data
D. Number of patients in the sample size of sample "sample size"

ANSWER B

b. The PARAMETER is:

A. All this clinic's patients who had injuries
B. Average recovery time for the patients in the sample who had sports injuries statistic
C. The recovery time for a patient who visited the clinic for a sports injury variable
(D.) Average recovery time for all patients who visited the clinic for a sports injury parameter

ANSWER D

c. The POPULATION is:

A. All of the clinic's patients
B. All the patients whose records were reviewed by the administrator for this study. sample
(C.) All of the clinic's patients who visited the clinic about sports injuries population
D. All people who received medical care.

A, D include people who did not have sports injuries but we are only interested in people treated for sports injuries at this clinic

ANSWER C