

Stat 10/Sanchez, Spring 2012

LAST NAME \_\_\_\_\_

FIRST NAME \_\_\_\_\_

Midterm 1, April 30

UCLA ID \_\_\_\_\_

TA SESSION \_\_\_\_\_

TA's NAME \_\_\_\_\_

ANSWER SHEET

WHEN DONE, PLEASE WRITE ALL YOUR ANSWERS IN THIS SHEET. ONLY THIS SHEET WILL BE GRADED.

1. (A) Women are more likely

(B) Men are more likely

Justify your answer :  $\frac{205}{380+205} = 0.35$   
female

$\frac{185}{214+185} = 0.46$

2. (A) About 11 out of 100

(B) About 20 out of 100

(C) About 5 out of 100

(D) Rates can not be determined without more information.

3.-(i) In this study, what is the treatment variable? Math Manipulatives.

(ii) In this study, what is the response variable? Quiz Scores

(iii) Which two features of a well-designed control experiment is this study missing?

Randomization and Double Blind.

4.- YES

(NO)

5. (A) About 9%

(B) 10

(C) 30

(D) 60

6. (A) Boys

(B) Girls

7.- (A) 61.9, 81.3

(B) 52.2, 91

(C) 42.5, 91

(D) 61.9, 71.6

8.- (A) Algebra

(B) Chemistry.

Why? Explain.  $Z$ -score Algebra = 1.166  $Z$ -score chemistry = 1.

9.- (A) Median house prices

(B) Average House prices

Explain. Histogram of house prices skewed right (Most houses in lower end some very expensive)

10.-Independent : commute distance Dependent : Minor accidents per year.

11.-(A) 5.2 children

(B) =3.194 children

(C) 2 children

(D) None of the above.

12.- (i) If one person is chosen randomly from the group, what is the probability that the person is female?

$\frac{88}{200}$

(ii) If one person is chosen randomly from the group, what is the probability that the person purchased a van? (1 pt)  $\frac{38}{200} = 0.19$

(iii) If one person is chosen randomly from the group, what is the probability that the person was male and bought a car? (1 pt)  $\frac{34}{200} = 0.17$

(iii) If one person is chosen randomly from the group, what is the probability that the person purchased a sport utility vehicle or a pick-up truck?(1pt)  $\frac{53+17}{200} = 0.35$

(iv) Find the probability that a randomly chosen female buyer bought a van (1 pt)  $\frac{17}{88} = 0.193$

(v) Using this example, state two events that are mutually exclusive (2 pts) Female vs. Male and

13. (A) 0.763, 0.0009 (B) 0.5, 0.2 (C) 0.25, 0.9 (D) None of the above.

14.- (i) There are (how many?) 2 variable(s) represented in this table and the variable(s) is(are) (circle one)

- (A) categorical (B) numerical (C) some numerical, one categorical

(ii) The table shows that smoking of mothers causes low birth weight of children. Circle one (1 pt).

TRUE FALSE

(iii) The spreadsheet with the unstacked original data set may have looked something like (write a couple of lines as example)(1pt)

ID	Low Birthweight	Habit
Baby 1	Yes or 1	SMOKE or YES
Baby 2	No or 0	DOES NOT SMOKE or NO

15.- According to that plot, are Brinks Collectors keeping the money?

YES NO

Explain briefly why you reach that conclusion (1 pt)

The regression line for Brinks Collectors is below the regression line for the honest ones. And most observations for Brinks collectors are below the regression line for honest collectors.