

HESC 500 Statistics Applied to Clinical Research
1st Short Test

Student Name: _____

Date: _____

Part 1 – 15 points

The following data represents the body mass index of 13 patients. Utilizing the data please calculate the following information:

24 27 31 23 26 28 39 41 23 32 32 42 33

***Hint: Arrange the data in order from lower to higher before you start the calculations.**

23 23 24 26 27 28 31 32 32 33 39 41 42

1. Compute the mean body mass Index:

$$\bar{X} = \frac{\sum X}{n} = \frac{401}{13} = 30.846$$

2. Compute the median body mass index:

~~23, 23, 24, 26, 27, 28, 31, 32, 32, 33, 39, 42, 42~~

Median = 31

3. Compute the mode body mass index: = 23 and 32

4. If a Body mass index of more than 30 is considered obese. How many patients of these samples are obese?

=

Answer: 7

5. What percentage of the sample represents that number: 53.8%

$$7/13 \times 100 = 53.8\%$$

$$= 7$$

6. What percentage of the sample has a body mass index less than 30? 46.2

Part 2 – 15 points

Marital Status	Number of Patients (f)	Relative Frequency (f/n)
Married	34	6.8
Separated	15	3
Divorced	4	0.8
Widowed	6	1.2
Never Married	11	2.2
Total	70	14

How many patients are single: 11+4+6+15= 36

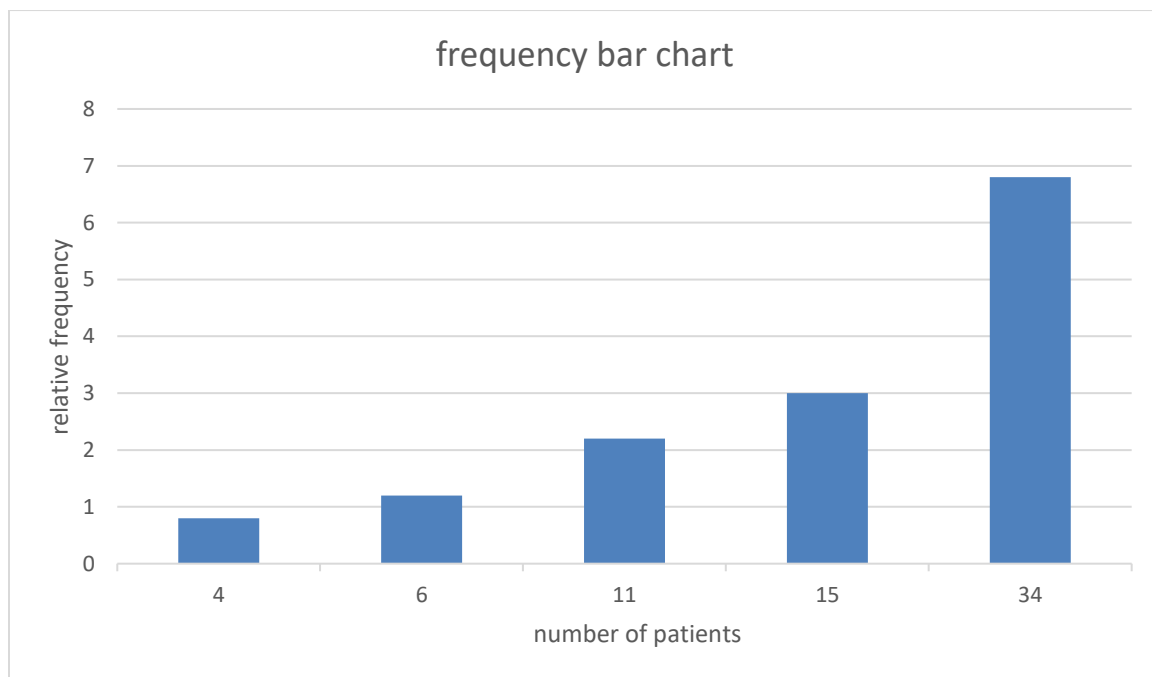
How many patients have being married before: = 4+6+34= 44

Part 3 – 5 Points

Create a Frequency Bar Chart with the information of the patient marital status.

Remember to place the information on the x and y axis and the chart title.

Insert Frequency Bar Chart



Please choose the best answer. 15 points

1. You are interested in studying nursing engagement and wellbeing after the nursing licensing requirements changed in your state. You randomly select 10 hospitals and outpatient centers throughout the state and survey the 2,400 nurses that work there. The 2,400 nurses are an example of:

- a. a population
- b. a sample
- c. a quantitative cohort
- d. personal that should be excluded

2. You are interested in studying the discharge time for surgical patients on your service in the past three months. You determine that this data is available for all surgical patients on your service in the past three months utilizing a basic electronic medical record search. Your budget supports this work so you decide to collect data on all the patients involved. Your study includes:

- a. The population
- b. The sample
- c. The interval data
- d. All patients admitted in the past year.

3. Researchers study the impact of internalized bias on patient care. Nurses complete a survey which determines a score for their internalized bias from 0-100. Without knowing the internalized bias score, patients are asked to rank the subsequent care they receive from the nurse as poor, fair, good or exemplary. In this study your dependent variable is measured at what level of measurement?

- a. Nominal
- b. Ordinal
- c. Interval
- d. Ratio