## Class Exercises for 2.a. Central Tendency

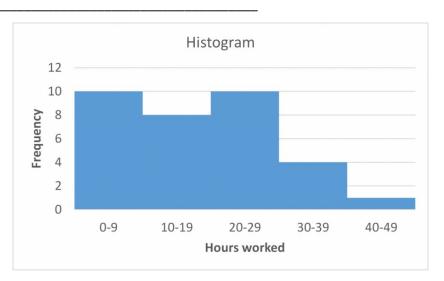
**1.** We will survey students in this classroom regarding the number of hours they typically work in a week to generate a dataset.

Number of work hours:

0, 0, 0, 0, 0, 0, 6, 8, 8, 8, 10, 12, 12, 14, 15, 15, 18, 20, 20, 20, 20, 22, 24, 24, 24, 25, 25, 30, 35, 36, 38, 40

a. The frequency table and histogram for this dataset are shown below. Write down four words/phrases to describe the dataset to someone who cannot see the graphs.

Values	Frequency	Percent
0-9	10	30%
10-19	8	24%
20-29	10	30%
30-39	4	12%
40-49	1	3%



- b. Calculate the **mean** of this dataset using the formula shown here. In English:
  - 1. Add up all the scores
  - 2. Divide by the number of scores

$$M = \frac{\sum X}{N}$$

M=

- c. Determine the **median** of this dataset.
  - 1. Count how many scores there are in the dataset.
  - 2. If odd, take the middle number.
  - 3. If even, take the average of the two middle numbers.

Median=

- d. Determine the **mode** of this dataset...
  - 1. Determine which score has the highest frequency in the dataset.
  - 2. (There can be multiple modes in a dataset.)

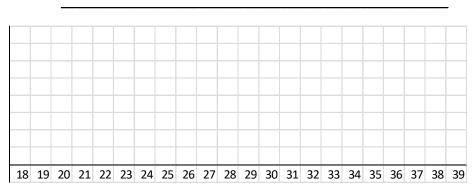
Mode=

**2.** Data collected from hospital records reveal that the age of first hospitalization for psychosis for a sample of patients are:

18, 20, 21, 22, 23, 23, 24, 28, 28, 29, 32, 37, 39

a. Create a frequency table and histogram for this dataset. (Don't forget labels!) Write down four words to

describe the dataset to someone who cannot see the graph.



b. Calculate the **mean** of this dataset using the formula shown here.

$$M = \frac{\sum X}{N}$$

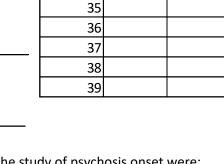
M=

c. Determine the **median** of this dataset.

Median=

d. Determine the **mode** of this dataset.

Mode=



27 28

33 34

- **3.** The number of years of education for <u>most</u> members of the sample in the study of psychosis onset were: 6, 7, 9, 10, 11, 12, 13, 13, 13, 15, 16
  - a. Find the mean and median for this dataset.

M=

Median=

b. Why do the mean and median differ? (HINT: Use a histogram to help you discern the shape of the distribution and how it might be influence these measures).

