**Fall 2018 BMCC MAT150.5 Statistics Midterm Exam Practice Exam**

1. The data below are the first test scores in one class. For this question, round all answers to the nearest **tenth, as needed**.

45 50 65 77 95 83 74 65 80 58

65 90 88 68 55 79 83 72 74 76

81 53 90 87 66

1. **Construct the frequency table by using *five* classes.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Class Limit | *f* | Class Midpoint | Cumulative Frequency | Class Boundary |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|   |  |  |  |  |
|   |  |  |  |  |

1. Create a frequency histogram to represent the above data.
2. Create a frequency polygon to represent the above data.
3. Create an ogive to represent the above data.
4. The sample data set below gives the prices (in dollars) of different brand scientific calculators. Use the data and calculate mean & standard derivation.

15 10 23 18 19

1. From the table below, find the expected value of hours of study math a day.

|  |  |
| --- | --- |
| x (hour of study math) | P(x) |
| 0 | 1/20 |
| 1 | 2/5 |
| 2 | 2/5 |
| 3 | 1/10 |
| 4 | 1/20 |

1. Find the mean, standard deviation of the frequency table given below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Class | Frequency |  |  |  |  |  |
| 1– 9 | 7 |  |  |  |  |  |
| 10 – 18 | 6 |  |  |  |  |  |
| 19 – 27 | 4 |  |  |  |  |  |
| 28- 36 | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. Two hundred viewers were asked if they are right hand or left hand. If a viewer is to be randomly selected from those surveyed.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Female (F) | Male (M) | TOTAL |
| Right Hand (R) | 75 | 70 |  |
| Left Hand (L) | 25 | 30 |  |
| TOTAL  |  |  |  |

1. Find the probability that the viewer is left hand
2. Find the probability that the viewer is a male or left hand.
3. Find the probability that the viewer is right hand given that the viewer is female.
4. The time x in years that an employee spent at a company and the employee’s hourly pay, y, for 5 employees are listed in the table below

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X (years)** | 1 | 6 | 4 | 2 | 6 |
| **Y (hourly pay)** | 15 | 32 | 25 | 18 | 28 |

1. Find the correlation coefficient **r**
2. Find the regression equation if it’s possible
3. Graph the regression line equation
4. **Counting Principle, Permutations and Combinations Problems. (Optional)**
5. You go to the cafeteria in BMCC for lunch and have a choice of 6 entrees, 4 sides, 5 drinks, and 2 desserts. Assuming you have one of each category, how many different lunches could be made?
6. You toss a coin 5 times. How many different outcomes are there?
7. There are 25 students in a math class, how many ways can professor pick 3 students from the class?
8. Miss Robot was asked to rank the top 5 students in her class of 25. In how many ways can that be done?