## Assignment 1

Name:
ID: $\qquad$

## Utility Maximization

1. Consider Consumer A who only consumes two goods - Chocolate and Carrots. The price of one bar of chocolate is $\$ 2$ and the price of one carrot is $\$ 1$. Currently she buys 8 chocolates and 15 carrots. Her marginal utility from the $8^{\text {th }}$ chocolate is 50 utils and her marginal utility from the $15^{\text {th }}$ carrot is 30 . What should she do to maximize her utility?

## Production and Costs

2. Firm A produces tables. They have rented 1 factory, and they pay a rent of $\$ 50$ per month for the factory space, which is fixed. They can hire labor with a wage rate of $\$ 10$ per labor. (SHOW ALL WORKINGS)

| Variable Input (Labor) | Fixed Input (Factory) | Output (TPP) | MPP | FC | VC | TC | MC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 1 | 0 |  |  |  |  |  |
| 1 | 1 | 20 |  |  |  |  |  |
| 2 | 1 | 42 |  |  |  |  |  |
| 3 | 1 | 66 |  |  |  |  |  |
| 4 | 1 | 88 |  |  |  |  |  |
| 5 | 1 | 108 |  |  |  |  |  |

