**Equations needed for the program March 14th of 2019**

1. I think that to begin with this program to determine the supply and demand equations we need to ask to the program’s user two options of endowments in order to get the slope of both equations.

🡪 Slope equation

🡪 Basic demand and supply equation

1. Example:
2. The question of the program can be something like: Please provide two examples of two consumer’s situations with the same utility that you want to get.

|  |  |  |
| --- | --- | --- |
| Situation 1 | =30 | =40 |
| Situation 2 | =20 | =70 |

🡪 Demand Equation

1. Please provide two examples of two supplier’s situations with the same profits that you want to get.

|  |  |  |
| --- | --- | --- |
| Situation 1 | =60 | =20 |
| Situation 2 | =120 | =10 |

🡪 Supply Equation

In order to solve this (I put de variables in red):

We can call this a for supply and c for demand and b for supply and d for demand in order to make the next step easier.

1. In order to calculate the surpluses, I think that the best idea is to use an integral.

Where:

g(x)=Supply equation

f(x)=Demand equation

1. If we want to add the government influence in the model there is two choices so far:
2. Set a max or min of the output quantity
3. Or to tax (positively=tax, negatively=subsides)

Project:

Program that works🡪 simulate production economy🡪 goods, factors, consumers, producers and interactions

Documentation: comments in code, description (word or ppt)