Problem Set 8

Overview: In this problem set you will examine AFDC type assistance programs using budget line and indifference curve analysis. This AFDC type program has the following characteristics.

$600 = \text{Max AFDC/month}$

$0 = \text{Min AFDC/month}$

$1,000 = \text{Disposable Income/month (AFDC + Earnings) at which AFDC starts being taken away}$

Take-away rate = ? … What was taught in class

$320/month = \text{Max leisure hours available}$

Step 1 (Graph 1):

a. On a sheet of graph paper or a spreadsheet printout, neatly and accurately draw a budget line showing disposable income for someone, given the above AFDC program, and a wage of $6/hr. Label this budget line “DI w AFDC”. On the same graph accurately draw and label another budget line, one showing gross income. Label this budget line “GI”. Label your curves, axes, and major points. Label this graph; “Graph 1”.

b. In Blue, draw a set of indifference curves for a person, Bob, who decides to work at a level in which he receives AFDC. Label these curves $U_1^{\text{Bob}}, U_2^{\text{Bob}},$ etc.

c. In Red, draw a set of indifference curves for a person, Chuck, who decides to work at a level in which he receives no AFDC. Label these curves $U_1^{\text{Chuck}}, U_2^{\text{Chuck}},$ etc.

Note: This will be scored as follows: $\text{Score} = 4 \times \text{Raw} \times \text{Graph} \times \text{Color} \times \text{Neat}$

Where: Raw = How accurately your graph reflects the correct budget line. Raw can run from 0 (very sucky) to 1 (perfect).

Graph = Whether or not you used graph paper or a spreadsheet printout. Graph = 0 if you did not and 1 if you did. Graph will equal either 1 or 0; nothing in between.

Color = Whether or not you used the colors as instructed. Color = 0 if you did not and 1 if you did. Color will equal either 1 or 0; nothing in between.

Neat = How neat and accurate your graph is. Neat can run from 0 (very sucky) to 1 (beautiful and precise).
Step 2 (Graph 2):

a. On a sheet of graph paper or a spreadsheet printout, neatly and accurately draw a budget line showing disposable income for someone, given the above AFDC program, and a wage of $12/hr. Label this budget line “DI w AFDC”. On the same graph accurately draw and label another budget line, one showing gross income. Label this budget line “GI”. Label your curves, axes, and major points. Label this graph; “Graph 2”.

b. In Blue, draw a set of indifference curves for a person, Bill, who decides to work at a level in which he receives AFDC. Label these curves $U^\text{Bill}_1$, $U^\text{Bill}_2$, etc.

c. In Red, draw a set of indifference curves for a person, Celia, who decides to work at a level in which he receives no AFDC. Label these curves $U^\text{Celia}_1$, $U^\text{Celia}_2$, etc.

Note: This will be scored as follows: \( \text{Score} = 4 \times \text{Raw} \times \text{Graph} \times \text{Color} \times \text{Neat} \)

Where: Raw, Graph, Color, and Neat are defined the same as in Step 1.

Step 3 (Graph 3):

a. On a sheet of graph paper or a spreadsheet printout, neatly and accurately draw a budget line showing disposable income for someone, given the above AFDC program, and a wage of $12/hr. Label this budget line “DI w AFDC”. On the same graph accurately draw and label another budget line, one showing gross income. Label this budget line “GI”. Label your curves, axes, and major points. Label this graph; “Graph 3”.

b. In Blue, draw a set of indifference curves for a person, Brent, who decides to work at a level in which he receives AFDC. Label these curves $U^\text{Brent}_1$, $U^\text{Brent}_2$, etc.

c. In Red, draw a set of indifference curves for a person, Cristi, who decides to work at a level in which he receives no AFDC. Label these curves $U^\text{Cristi}_1$, $U^\text{Cristi}_2$, etc.

Note: This will be scored as follows: \( \text{Score} = 4 \times \text{Raw} \times \text{Graph} \times \text{Color} \times \text{Neat} \)

Where: Raw, Graph, Color, and Neat are defined the same as in Steps 1 and 2.
Step 4: On a separate sheet of paper, neatly answer the following.

a. (1.5 pts) Which group, those with low opportunities (i.e. low available wages) or those with high opportunities (i.e. low available wages) was AFDC designed to help?

b. (3 pts) Which group is more likely to have their work incentives adversely affected by AFDC; those with low opportunities (i.e. low available wages) or those with high opportunities (i.e. low available wages)? Explain your answer.

c. (3 pts) What do your answers to a and b say about AFDC’s effectiveness in ending the “cycle of poverty”? Explain your answer.

Step 5: (0.5 pts) Staple your work together and turn it in.