NOVA SCHOOL OF BUSINESS AND ECONOMICS

Microeconomics
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Class #5: Consumer Theory: budget constraints and indifference curves.

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Classes: 40, 41

Question 1
(Budget Constraints)

Joe has a budget of €60/month to spend on high-tech at-home entertainment. There are only two goods that he considers: CD's and video rentals. For each of the situations described below, draw Joe's budget constraint. Denote the axes as "CD's per month" and "video rentals per month." Label the x and y intercepts of the budget constraints, the slopes, and any kink points (that is, give the quantities associated with the intercepts, slopes, and kinks.)

(a) CD's cost €12 each and video rentals are €4 each. (This is a standard budget constraint.)

(b) Video-rentals cost €4 each. CD's cost €12 each for the first three. However, if more than three CD's are purchased, the price for additional CD's, that is, for the fourth, fifth, etc. CD, drops to €8. [Note: if three CD's are purchased, the cost is 12*3 = 36; if four are purchased, the cost is (12*3) + (8*1) = €44.]

(c) Video rentals cost €4 each. The price of CD's is €12 for up to three CD's but drops to €10 if more than three are purchased. That is, if three CD's are purchased, the cost is 12*3 = €36; if four are purchased, the cost is 10*4 = €40.

(d) Video rentals cost €4 each. CD's can be bought for €12 each or in groups of three for €30 for the three. Hence, four CD's cost 30+12 = €42 and six CD's cost 30 + 30 = €60.

(e) CD's cost €12 each and video rentals are €4 each. However, for €24 Joe can purchase a video card that allows him to rent 10 videos in a month; for more than 10 videos, the cost returns to €4 each. He is allowed to purchase only one of these cards per month.

(f) As in part (e) but now Joe is allowed to purchase as many of these cards as he would like each month. Assume that he must use the cards entirely on each month.

Question 2
(Indifference Curves)

Draw indifference curves that represent the preferences of each of the following people. For each graph, define the axes and label the direction of preference with an arrow.
(a) Joe likes bananas produced in Madeira the same way as he likes bananas produced in Equador. He gets the same pleasure regardless where bananas are produced.

(b) Carlos likes hamburgers and he always drinks one Coke with each hamburger.

(c) Marie likes concerts but doesn't care whether or not she goes to movies.

(d) Ruth likes ice creams but dislikes olives.

(e) Frank dislikes both movies and concerts. He dislikes each movie more the more movies he goes to. He dislikes each concert the same, no matter how many he goes to.