Economics Lecture 3 - Exercise

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Exercise 1

Explain what the budget line is.

Suppose we have two goods. Price of good 1 is 10 and price for good 2 is 15. Income is 30. Construct a diagram with quantities on the axis and draw the budget line.

How do the prices and the income affect the shape of the graph? What happens if the price of one good rises? What if income increases?

Exercise 2

Suppose a consumer has two goods from which to choose. Given price and income depict how she can choose.

Illustrate indifference curves in the graph.

Show how can she maximize her utility.

Is it possible to have a situation in which she finds more than one point where she maximize?

Exercise 3

Starting from previous exercise, how will the utility change if price of good 1 is cut by half?

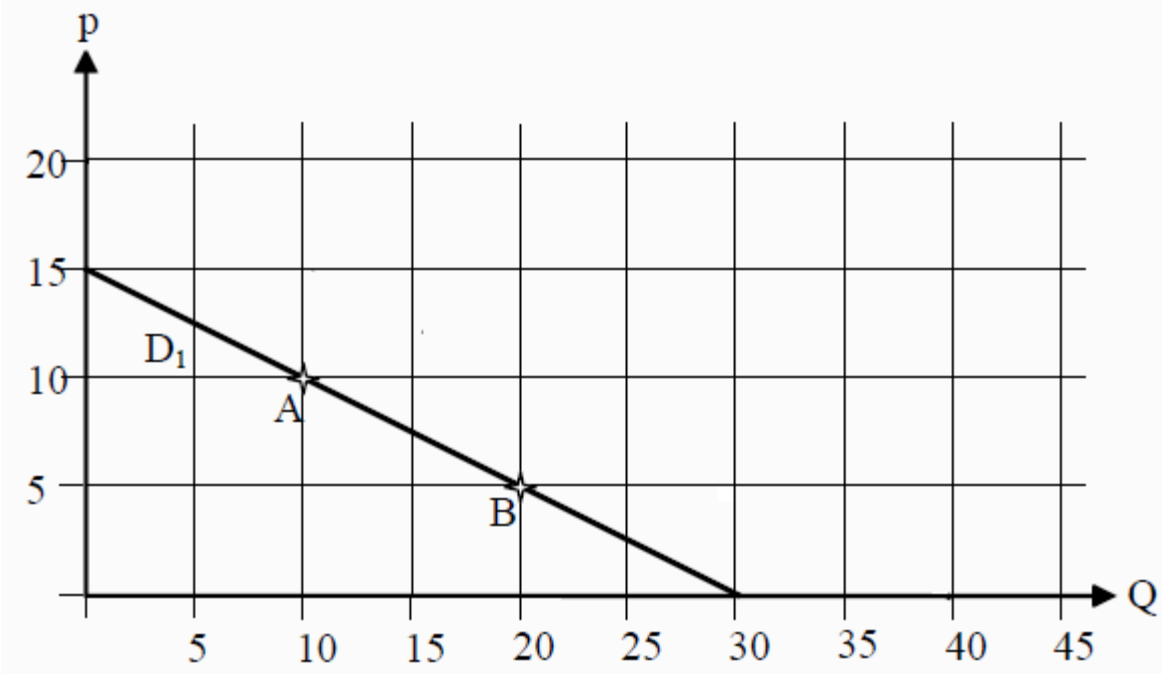
Exercise 4

Assume you deal with the following utility function $u(x, y) = 4xy^2$.
The price for good x is 8 and for good y is 10. Can you fin the uncompensated demand?

Exercise 5

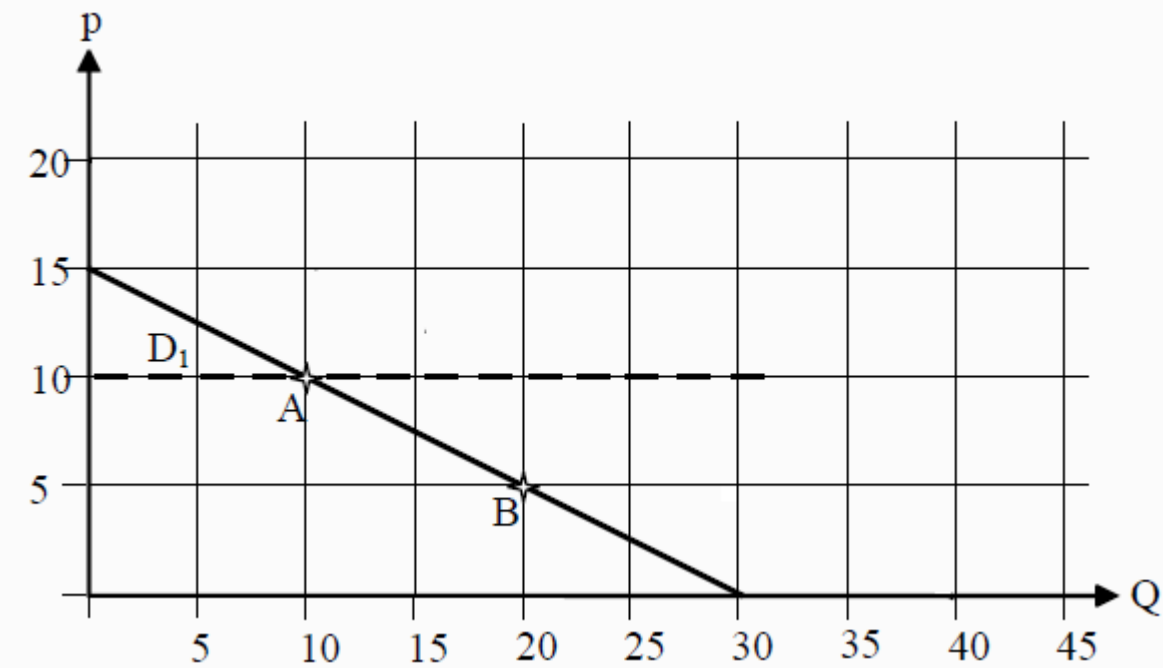
State the definition of price elasticity, income elasticity, cross-price elasticity. What do they mean?

Look at the graph below, D1 is the demand for a certain good at different prices. Calculate the price elasticity of the good at point A and at point B. Do you get same result? Why?



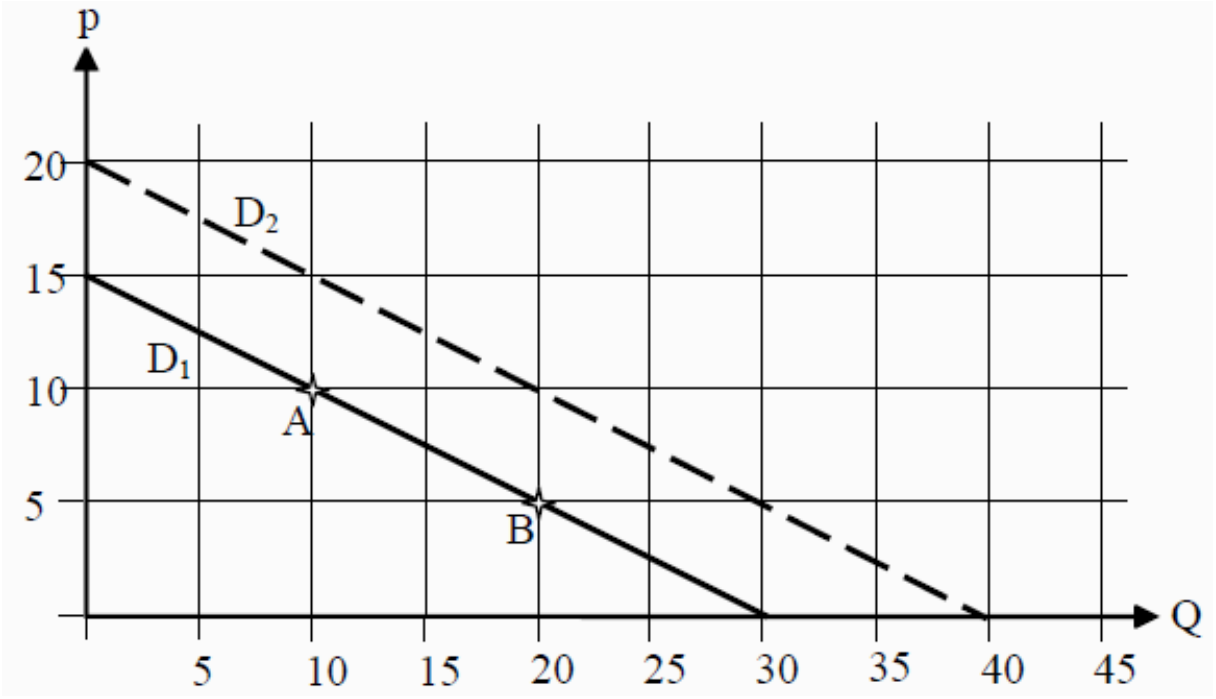
Exercise 5

If the slope of D1 would change, so that the demand becomes a horizontal line through point A, what would the price elasticity in point A be?



Exercise 5

If income increases by 10% so that D1 shifts to D2. Calculate approximate value for the income elasticity in point A.



Exercise 5

Suppose price of good is 5 and that it increases by 5%. As a consequence the demand of another good decreases by 20%. Calculate the cross-price elasticity for the other good. Is the other good a substitute good or a complementary good to the first one?