

ECON 2201: Demand Example

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Suppose a consumer has preferences represented by the function $U(A, B) = AB$, where A and B are, respectively, quantities of apples and bananas consumed. Then we have $MU_A \equiv \frac{\delta U}{\delta A} = B$ and $MU_B \equiv \frac{\delta U}{\delta B} = A$.

What does the above tell you about demand? For example, try the following:

1. Suppose $p_A = 6$, $p_B = 1$, and the consumer's income is \$60. What combination of apples and bananas will the consumer choose?
2. What utility does the consumer achieve with this bundle? What are some other bundles that yield the same level of utility? Sketch the indifference curve.
3. Suppose the consumer's income doubles? How will their choice change?
4. Suppose the price of apples falls to \$3? How will their choice change?
5. What are some other points on the demand curve?
6. Write an equation for the consumer's Marshallian demand (i.e. the quantity of apples chosen at various money prices of apples holding money income and the money price of bananas constant). Sketch the demand curve.
7. What can you say about the price elasticity of demand for this consumer?