

# Econ 301 Discussion - 9/29/2023

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## Content Review

- Cobb-Douglas Demand
  
  
  
  
  
  
  
  
  
  
- Elasticities
  
  
  
  
  
  
  
  
  
  
- Income and substitution effects

## Practice Questions

1. My preferences over bread,  $b$  (in loaves), and butter,  $t$  (in sticks), are represented by  $u(b, t) = bt$ . If my budget is  $Y = 4$ , price of bread is  $P_b = 1$ , and price of butter is  $P_t = 1$ , what is my demand for bread and butter?
  
  
  
  
  
  
  
  
  
  
2. Now consider the same setup as 1, but the price of bread increases to  $P'_b = 4$ . How much more income do I need to be indifferent to my bundle in 1? At this income and new prices, solve for my demand for bread and butter.

3. Consider again the same setup as 1 and 2, with the change in  $P_b$ . What are the income and substitution effects in  $b$ ?

4. Consumer A's utility function is  $u(a, b) = a + 2b$ . Price of  $a$  is  $P_a = 1$ , price of  $b$  is  $P_b = 3$ . How much of  $a$  and  $b$  does she consume as a function of her income,  $Y$ ?

5. Consumer B has demand curve  $D_A(P_a) = 20 - P_a$ . What is the price elasticity of demand at  $P_a = 5$ ?

6. **Puzzle:** When can  $u(a, b) = a + b$  and  $v(a, b) = \max\{a, b\}$  induce different choices?