

NTU SSS Economics HE1001

Tutorial 3 (Week 4): Consumption

1. Janice consumes two goods, X and Y. Janice has a utility function given by the expression:

$$U = 4X^{0.5}Y^{0.5}$$

The current prices of X and Y are 25 and 50, respectively. Janice currently has an income of 750 per time period.

- a. Write an expression for Janice's budget constraint.
- b. Calculate the optimal quantities of X and Y that Janice should choose, given her budget constraint. Graph your answer.

2. Draw a budget line and then draw an indifference curve to illustrate the satisfaction-maximizing choice associated with two products. Use your graph to answer the following questions.

- a. Suppose that one of the products is rationed. Explain why the consumer is likely to be worse off.
- b. Suppose that the price of one of the products is lowered from the current price. Would the consumer be better off or worse off?

3. Bobby is a university student who has \$500 of income to spend each semester on books and pizzas. The price of a pizza is \$10 and the price of a book is \$50. Diagram Bobby's budget constraint. Now, suppose Bobby's parents buy him a \$300 gift certificate each semester that can only be used to buy books. Diagram Bobby's budget constraint when he has the gift certificate in addition to his \$500 income. Is Bobby better-off with the gift certificates?