


9A

## Using Indifference Curves and Budget Lines to Understand Consumer Behavior, pages 309–321

LEARNING OBJECTIVE: Use indifference curves and budget lines to understand consumer behavior.

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### Review Questions

- 9A.1 What are the two assumptions economists make about consumer preferences?
- 9A.2 What is an indifference curve? What is a budget constraint?
- 9A.3 How do consumers choose the optimal consumption bundle?

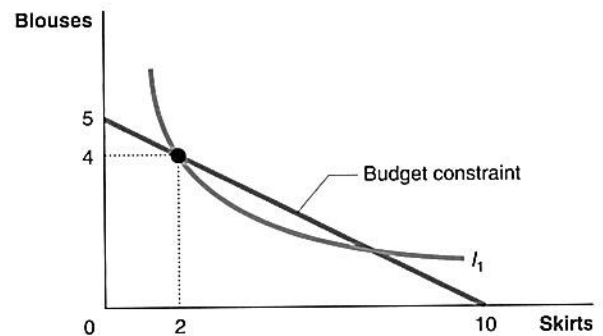
### Problems and Applications

- 9A.4 Jacob receives an allowance of \$5 per week. He spends all his allowance on ice cream cones and cans of Lemon Fizz soda.
- If the price of ice cream cones is \$0.50 per cone and the price of Lemon Fizz is \$1 per can, draw a graph showing Jacob's budget constraint. Be sure to indicate on the graph the maximum number of ice cream cones and the maximum number of cans of Lemon Fizz that Jacob can buy.
  - Jacob buys 8 cones and 1 can of Lemon Fizz. Draw an indifference curve representing Jacob's choice, assuming that he has chosen the optimal combination.
  - Suppose that the price of ice cream cones rises to \$1 per cone. Draw Jacob's new budget constraint and his new optimal consumption of ice cream cones and Lemon Fizz.
- 9A.5 Suppose that Jacob's allowance in problem 9A.4 climbs from \$5 per week to \$10 per week.
- Show how the increased allowance alters Jacob's budget constraint.
  - Draw a set of indifference curves showing how Jacob's choice of cones and Lemon Fizz changes when his allowance increases. Assume that both goods are normal.
  - Draw a set of indifference curves showing how Jacob's choice of cones and Lemon Fizz changes when his allowance increases. Assume that Lemon Fizz is normal but cones are inferior.
- 9A.6 Suppose that Calvin considers Pepsi and Coke to be perfect substitutes. They taste the same to him, and he gets exactly the same amount of enjoyment from drinking a can of Pepsi or a can of Coke.
- Will Calvin's indifference curves showing his trade-off between Pepsi and Coke have the same curva-

ture as the indifference curves drawn in the figures in this appendix? Briefly explain.

- How will Calvin decide whether to buy Pepsi or to buy Coke?

- 9A.7 In the following budget constraint–indifference curve graph, Nikki has \$200 to spend on blouses and skirts.
- What is the price of blouses? What is the price of skirts?



- Is Nikki making the optimum choice if she buys 4 blouses and 2 skirts? Explain how you know this.
- 9A.8 (Related to the *Making the Connection* on page 313) Marilou and Hunter both purchase milk and doughnuts at the same Quik Mart. They have different tastes for milk and doughnuts and different incomes. They both buy some milk and some doughnuts, but they buy considerably different quantities of the two goods. Can we conclude that their marginal rate of substitution between milk and doughnuts is the same? Draw a graph showing their budget constraints and indifference curves and explain.
- 9A.9 Sunsweet decides that prune juice has a bad image, so it launches a slick advertising campaign to convince young people that prune juice is very hip. The company hires Eminem, Jay-Z, and Trick Daddy to endorse its product. The campaign works! Prune juice sales soar, even though Sunsweet hasn't cut the price. Draw a budget constraint and indifference curve diagram with Sunsweet prune juice on one axis and other drinks on the other axis and show how the celebrity endorsements have changed things.
- 9A.10 (Related to *Solved Problem 9A-1* on page 316) Dave has \$300 to spend each month on DVD

and CDs. DVDs and CDs both currently have a price of \$10, and Dave is maximizing his utility by buying 20 DVDs and 10 CDs. Suppose Dave still has \$300 to spend, but the price of a DVD rises to \$12, while

the price of a CD drops to \$6. Is Dave better or worse off than he was before the price change? Use a budget constraint–indifference curve graph to illustrate your answer.

» End Appendix Learning Objective