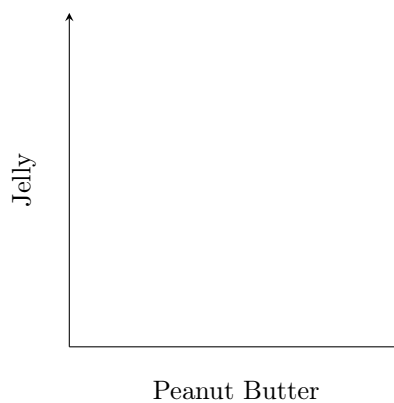
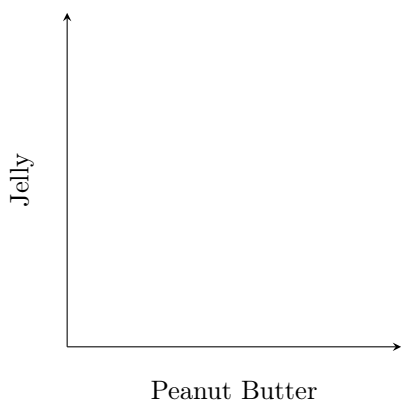
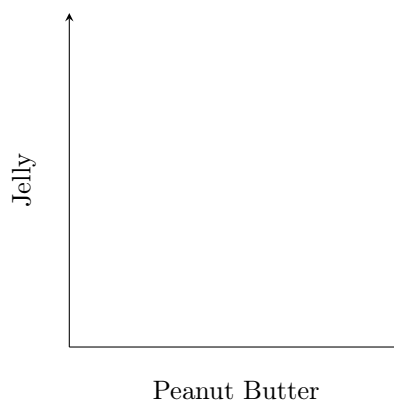
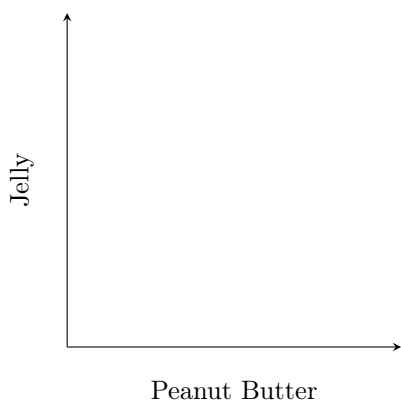


Chapter 3

1. With peanut butter on the x -axis, and jelly on the y -axis, draw a set of at least two indifference curves to represent the following types of preferences:
 - (a) I like both peanut butter and jelly, and always get the same additional satisfaction from an ounce of peanut butter as I do from 2 ounces of jelly.
 - (b) I like peanut butter, but neither like nor dislike jelly.
 - (c) I like peanut butter, but dislike jelly.
 - (d) I like peanut butter and jelly, but I only want 2 ounces of peanut butter for every ounce of jelly.



2. For each of the utility functions below, answer the following questions.

- (i) Is the assumption that more is better satisfied for both goods?
- (ii) What is the marginal utility for each of the goods?
- (iii) Does the marginal utility of x diminish, remain constant, or increase as the consumer buys more x ? Explain.
- (iv) What is the marginal rate of substitution (MRS) of x for y ?
- (v) Is the $MRS_{x,y}$ diminishing, constant, or increasing as the consumer substitutes more x for y along an indifference curve?

(a) $U(x, y) = 10x - 0.5x^2 + 20y - y^2$ (c) $U(x, y) = xy^2$

(b) $U(x, y) = 6x^{1/3}y^{2/3}$

(d) $U(x, y) = \sqrt{x} + 2\sqrt{y}$