

## Problem Set 1 Suggested Answers

**Problem 1.** *Think what is the cost of one can of Coca-cola. First try to figure out what is the accounting cost, i.e. the monetary cost. Next think what would be a total economic cost of producing one can of Coca-cola. Try to provide some examples.*

**Answer:** Accounting cost might be the costs of production of Coca-cola (ingredients, machines, labor etc.). Total Economic cost also contains the opportunity costs, i.e. the costs of utilizing all inputs into production of Coke rather than in anything else, opportunity cost of spent time etc.

**Problem 2.** *Explain whether each of the following government activities is motivated by a concern about equality or a concern about efficiency. In the case of efficiency, discuss the type of market failure involved:*

a. *instituting laws against driving while intoxicated*

**Answer:** Efficiency – risk of damaging others

b. *read the following [article](#) and analyze the described policy.*

**Answer:** Efficiency

c. *setting minimum wage policy.*

**Answer:** Equality

**Problem 3.** *Jana has 1,200 CZK to spend and wants to buy either training shoes or a new mp3 player to listen to music while working out. Both the shoes and the mp3 player cost 1,200 CZK, so she can only buy one. This illustrates the basic concept that*

a. *People respond to incentives.*

b. *people face trade-offs.*

c. *rational people think at the margin.*

d. *Governments can sometimes improve market outcomes.*

**Answer:** b

**Problem 4.** *The phenomenon of scarcity stems from the fact that*

a. *most economies' production methods are not very good.*

b. *in most economies, wealthy people consume disproportionate quantities of goods and services.*

c. *governments restrict production of too many goods and services.*

*d. resources are limited.*

**Answer:** d

**Problem 5.** *A likely effect of government policies that redistribute income and wealth from the wealthy to the poor is that those policies*

- a. enhance equality.*
- b. enhance efficiency.*
- c. increase the reward for working hard.*
- d. All of the above are correct*

**Answer:** a

**Problem 6.** *A certain state legislature is considering an increase in the state gasoline tax. Representative Campbell argues that an increase in the gasoline tax would harm low-income drivers disproportionately. Representative Richards responds by saying that low-income drivers own smaller cars that use less gasoline, and that low-income drivers therefore would not be harmed disproportionately.*

- a. Representative Campbell's argument is based primarily on efficiency, while Representative Richards' argument is based primarily on equality.*
- b. Representative Campbell's argument is based primarily on equality, while Representative Richards' argument is based primarily on efficiency.*
- c. Both representatives' arguments are based primarily on efficiency.*
- d. Both representatives' arguments are based primarily on equality.*

**Answer:** d

**Problem 7.** *Suppose the state of Wyoming passes a law that increases the tax on cigarettes. As a result, smokers who live in Wyoming start purchasing their cigarettes in surrounding states. Which of the following principles does this best illustrate?*

- a. People respond to incentives.*
- b. Rational people think at the margin.*
- c. Governments can sometimes improve market outcomes.*
- d. Markets are usually a good way to organize economic activity.*

**Answer:** a

**Problem 8.** *Nearly 30 US states use the death penalty exclusively for the crime of murder. At the same time, only few states execute death penalty against such crime as rape. Knowing that people (including those who commit crime) think at the margin, could you explain the observed phenomenon?*

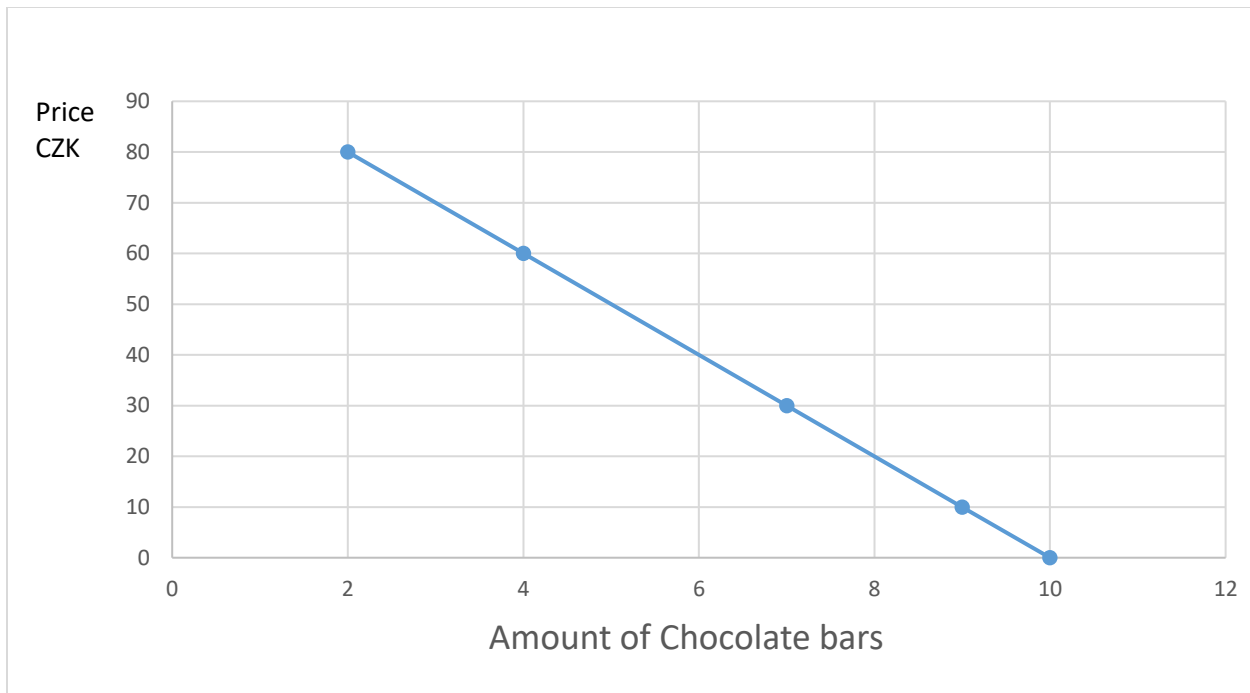
**Answer:** (not the most pleasant exercise) The idea can be to disincentivize rapists from killing their victims. If both crimes were penalized equivalently, people who already committed rape would be indifferent between putting the victim to death or let him/her alive.

**Problem 9.** *Suppose you observe the amount of chocolate bars that Paul consumes for a given price. The schedule is the following:*

PRICE (CZK)	AMOUNT OF CHOCOLATE BARS
0	10
10	9
30	7
60	4
80	2
90	1

*Draw a relationship between the price and the amount of chocolate bars that Paul consumes. Put price on the vertical axis and the amount on the horizontal axis. Does the relationship seem linear? Assume that the schedule represents a linear curve, what would be its slope?*

**Answer:**



The relationship is indeed linear. The slope is:  $\Delta \text{price} / \Delta \text{amount} = (0-10) / (10-9) = -10$

**Problem 10.** *A rational decision- maker takes an action if and only if*

- a) the marginal benefit of the action exceeds the marginal cost of the action.*
- b) the marginal cost of the action exceeds the marginal benefit of the action.*
- c) the marginal cost of the action is zero.*
- d) the opportunity cost of the action is zero.*

**Answer:** a

**Problem 11.** *Define opportunity cost. What is the opportunity cost to you of attending college? What was your opportunity cost of coming to class today?*

**Answer:** Opportunity cost shows the cost of foregone opportunity. Instead of coming to class you could have earned money from working or could have earned utility from going to hiking trip, let's say.

**Problem 12.** *You have the afternoon free. You have a choice between going to the movies with a friend or studying economics for three hours. If you go to the movies, you will spend \$8.00 on a ticket and \$4.50 on popcorn. If you choose to study economics for three hours, you will raise your*

*exam grade by 10 points.*

a) *What is your opportunity cost of going to the movies?*

**Answer:** Monetary cost (\$12.50) plus opportunity cost (10 points on your exam grade).

b) *What is your opportunity cost of studying at home?*

**Answer:** The enjoyment you would have received from going to the movies with your friend.

**Problem 13.** *Maria quits her job at a bank, which pays 300,000 CZK a year, to enroll in a two-year graduate program in Economics. Her annual school expenses are 240,000 CZK for tuition and fees. What is her opportunity cost of attending the two-year graduate program?*

**Answer:**  $240,000 \cdot 2 + 300,000 \cdot 2 = 1,080,000$