

1. Suppose the country of Musicland produces guitars (made of wood) and trumpets (made of brass). When using all its resources efficiently it can produce the following combinations:

Guitars	0	10	20	30	40
Trumpets	90	75	55	30	0

- (a) (5 points) Graph the production possibilities frontier. Label the portions of the figure that represent efficient levels of production, inefficient levels of production, and impossible levels of production.
- (b) (5 points) Compute the marginal opportunity cost for every positive production level of guitars given in the table.
- (c) (5 points) Suppose an economy is not producing efficiently. Is it possible to increase production of guitars without decreasing production trumpets? Illustrate with the above production possibilities frontier.
- (d) (5 points) Suppose there is a forest fire, destroying trees used to produce wood. Illustrate the impact on the production possibilities frontier.

5. (5 points) Suppose there is a decrease in interest rates in the United States and no change in interest rates in Japan. Describe and illustrate the impact this could have on the value of the U.S. dollar (USD) relative to the Japanese Yen (JPY).
6. (5 points) Suppose there is increase in demand from European countries for oil extracted and exported from Russia. Describe and illustrate the impact on value of the Euro (EUR) relative to the Russian Ruble (RUB).
7. (5 points) Suppose people expect an appreciation of the U.S. Dollar. Describe and illustrate the impact this could have on the value of the U.S. dollar relative to the Euro.

For the problems below, suppose an economy produces only machines and information technology services (ITS), and the prices and quantities that prevailed per unit of each for the last two years were given by:

	2014		2015	
	Price	Quantity	Price	Quantity
Machines	\$150	125	\$157	140
ITS	\$70	200	\$80	220

8. (5 points) Compute the growth rate of real GDP using 2014 as a base year.

9. (5 points) What was the inflation rate from 2014 to 2015?

10. (5 points) Suppose in 2014 you earned \$20 per hour working full time. In 2015 you earned \$24 per hour working full time. What was the growth rate of your nominal wages? In terms of purchasing power of wages, did you earn more in 2014 or 2015?

11. (5 points) Calculate the real wage for each 2014 and 2015. In terms of purchasing power of wages, did you earn more in 2014 or 2015?

12. (5 points) Describe two problems using real GDP as a measure of standard of living.

13. Suppose the economy of Sesame Street has a non-institutionalized, civilian adult population of 35 people / monsters. Suppose the following:

- 12 are employed singing songs on the street,
- 4 are employed at a corner convenience shop,
- 3 are employed on the television show, Elmo's World,
- 1 is employed as a cookie taste tester, and
- 7 people are employed sweeping the clouds and keeping the air sweet.
- There are 2 young and wealthy people, Bert and Ernie, who not employed; but they not interested in having a job and are instead enjoying their time living in an upscale loft apartment, downtown Sesame Street.
- 1 monster, named Oscar, used to be employed but was laid off some time ago. He initially started looking for a job, but he gave up hope and quit looking. Having lost his job and his income, he moved into a garbage can and now just complains all day.
- 5 monsters are not employed and they are actively seeking a job.

(a) (5 points) Define the labor force participation rate and compute the labor force participation rate for Sesame Street.

(b) (5 points) Define the unemployment rate. Compute the unemployment rate for Sesame Street.

(c) (5 points) Define a discouraged worker. How many discouraged workers are there in Sesame Street?

(d) (5 points) Describe two problems using the headline unemployment rate as a measure of labor market health.