

Week 1 Homework: Measuring Production, Employment, and Prices

Directions: Notice that all problems ask you for a descriptive answer in addition to performing a calculation. For full credit, make sure that you do both. You may print these sheets and put your answers in the space provided or you may use your own paper to write your answers.

When you have finished, scan or take pictures of your work, combine all images to a single PDF file, and upload your work as a single PDF file to the Canvas Assignment area. There are apps available for Apple and Android mobile devices that can create PDF documents using your device's camera, including the Apple iPhone's native *Notes* app (use the *scan document* feature) and *Adobe Scan* app available for Android and Apple mobile devices. There are also free online tools such as <https://online2pdf.com/> and <https://www.easypdfcloud.com/>.

Use the following scenario to answer questions 1-5

Suppose an economy produces only vegetarian burgers and vegetarian chili, and the prices and quantities that prevailed for 2021 and 2022 are given in the following table.

	2021		2022	
	Price	Quantity	Price	Quantity
Veggie Burgers	\$12	30	\$14	35
Veggie Chili	\$8	22	\$9	25

1. Compute nominal GDP for 2021 and 2022.

2. Use 2021 as a base year and compute real GDP for 2021 and 2022.

6. With recent improvements in technological automation, automobile production in manufacturing facilities have become increasingly automated. As a result, there has been a permanent reduction in demand for automobile manufacturing employment in the United States. What type of unemployment does this cause? Explain.

7. Suppose the country of LoompaLand has a civilian working-age population of 14,000 Oompa Loompas who are characterized as follows:

- 8,000 are employed at Willy Wanka's Chocolate Factory
- 2,000 are employed as chocolate industry spies by Sluggworth's Chocolates
- 1,500 are employed as vocalists in the local music industry
- 1,000 Oompa Loompas are looking for jobs, but are not yet employed
- 1,200 Oompa Loompas are not employed, but are not looking for jobs because they became frustrated and gave up trying to find a job
- 300 Oompa Loompas are retired, not interested in working.

(a) Define the **labor force participation rate**. Compute the labor force participation rate for LoompaLand.

(b) Define the **unemployment rate**. Compute the unemployment rate for LoompaLand.

(c) Define **discouraged worker**. How many discouraged workers are there in LoompaLand?