

Homework 1: Measuring Production, Employment, and Prices

Write your answers in the space provided or on your own paper. When you have finished, scan or take pictures of your work, combine all images to a single PDF file, assure that all pictures are oriented right-side up, and upload your work as a single PDF file to the Canvas Assignment area. You may use <https://www.easypdfcloud.com/> to combine your images to a single PDF file.

Suppose an economy produces only vegetarian burgers and vegetarian chili, and the prices and quantities that prevailed for 2020 and 2021 are given in the following table.

| | 2020 | | 2021 | |
|-----------------------|--------------|-----------------|--------------|-----------------|
| | Price | Quantity | Price | Quantity |
| Veggie Burgers | \$15 | 100 | \$16 | 110 |
| Veggie Chili | \$18 | 80 | \$20 | 85 |

1. Compute nominal GDP for 2020 and 2021.

2. Use 2020 as a base year and compute real GDP for 2020 and 2021.

6. With technology growth over the last several decades, automobile 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 non-institutionalized, civilian adult population of 40,000. Of these people (Oompa Loompas, actually), 32,000 are employed at Willy Wanka's Chocolate Factory; 1,000 are employed as chocolate industry spies by Sluggworth's Chocolates; 1,500 are employed as vocalists in the local music industry; 2,000 Oompa Loompas are looking for jobs, but are not yet employed; and 2,500 Oompa Loompas are not employed, but are not looking for jobs because they became frustrated and gave up trying to find a job. The remaining 1,000 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?