

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (15 points) Suppose a person's taxable income was \$50,000. If the table to the right was the taxes for the country, what are the marginal tax rate, total taxes paid, and the average tax rate which this person is facing? Show all calculations. If there are none, then explain how you got the number.

Income bracket	Tax rate
\$0 - \$10,000	10%
\$10,000 - \$20,000	15%
\$20,000 - \$45,000	20%
\$45,000 - \$90,000	25%
>\$90,000	30%

2) (10 points) What is the unemployment rate in the USA right now? Make sure you cite the source. Is that a good number, too high, or too low? Explain your logic.

3) (15 points) Suppose a country has 1000 people of working age. 540 of them have jobs. 60 people have jobs and are looking for a job. 100 people do not have a job, would like a job, but are not looking. 140 people are stay-at-home parents. The rest are retired. Calculate the labor force participation rate and the unemployment rate. Show all work and state which people you are adding together.

4) (15 points each) Answer each part in a separate paragraph. For each event, what happens to the labor force participation rate and the unemployment rate. State all assumptions you are making. Which type of unemployment changed? Why did you choose that type?

A) I have a friend who is a stay-at-home dad. He is thinking of looking for a job. What will happen if he does look for a job?

B) A lifeguard at a local outdoor pool got laid off recently.

C) John has been unemployed for so long he (and 772,000 others in the past year) has quit looking for a job. <https://www.bls.gov/news.release/pdf/empst.pdf>

D) Amy got laid off in April of 2020 due to working in a hotel and COVID hitting. Interestingly, another industry hard hit was healthcare. It saw a lot of layoffs. <https://www.cnn.com/2020/05/08/these-industries-suffered-the-biggest-job-losses-in-april-2020.html>

Below is just for your curiosity.

Of interest I found that the unemployment rate in Michigan fell to 5.2% in August and in Iowa, it rose to 3.8%. Note that not only are those numbers very different, they are moving in opposite directions.

<https://www.moodyonthemarket.com/michigan-unemployment-rate-edges-down-in-august/>
<https://www.kcrg.com/2025/09/18/unemployment-rises-iowa/>