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) (10 points) According to the article on AARP, the Social Security Trust Fund will run out of money in 2034. What are the two long-term trends which are causing that? (The video on the page mentions a cause, but I am looking for two things I talked about which are causing their cause.) Explain how they cause the fund to run out. https://www.aarp.org/retirement/social-security/info-2020/10-myths-explained.html
2) (20 points) One possible solution to the problem in Question \#1, is to increase the retirement age. How would that reduce the problem? If you were the President, would you include that as part of your solution? Explain your logic.
3) (20 points) One possible solution to the problem in Question \#1, is to increase the cap on the income subject to the Social Security tax. How would that reduce the problem? If you were the President, would you include that as part of your solution? Explain your logic.
4) (20 points) Use the table to the right to calculate the marginal tax rate, total taxes paid, and average tax rate for a person earning $\$ 100,000$. Show all work. If there is no work, then briefly explain how you got the answer.
5) (15 points) How can increasing a tax rate result in less tax revenue? Use an explanation which applies to all taxes. Give a numerical example of an excise tax, of an increase in the

| Income Bracket | Tax Rate |
| :---: | :---: |
| $\$ 0-\$ 20,000$ | $5 \%$ |
| $\$ 20,000-\$ 50,000$ | $10 \%$ |
| $\$ 50,000-\$ 90,000$ | $20 \%$ |
| $\$ 90,000-\$ 150,000$ | $30 \%$ |
| $>\$ 150,000$ | $40 \%$ |
|  |  | tax rate causing a decrease in tax revenue.

6) (15 points) At first, it looks like a general sales tax is a proportional tax. Explain why that statement is true. However, I argue that most sales taxes are slightly regressive. Explain my logic.
