

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) To retire and keep your standard of living, you need to save 20 times your annual income. Suppose your retirement fund earns 6% interest and if you earn \$50,000/year. If you save for 40 years, you need to save \$502.14/month. If you save for 30 years, you need to save \$1070.05/month. There are two reasons why the extra 10 years greatly reduces how much you have to save. What are the two reasons? Explain your logic. (Note that this means you should start saving for retirement today.) The three articles below discuss how to know if you save enough for retirement and how to motivate yourself to save. The first one is best. The second one is basically and advertising for an app. I have one problem with it. If you only save 10x your income, you cannot keep your standard of living unless you either are earning 10% per year or you draw down your assets. Therefore, the chart does not have you saving enough so that app is probably a bad idea, but their steps on saving are good (except Step #4). The third one basically says most advice on how to save is bad and people are not saving enough.

https://getpocket.com/explore/item/the-best-advice-for-saving-as-much-as-you-can?utm_source=pocket-newtab

<https://www.pocketnest.com/post/how-much-should-i-be-saving-for-retirement>

<https://www.psychologytoday.com/us/blog/the-science-behind-behavior/201601/why-saving-goals-don-t-always-help-consumers>

2) (10 points) Suppose your bank account is earning 2% interest. Approximately, how long will it take to double? Show all work. If your credit card charges 24% interest, approximately, how long will it take to double if you make no payments and have no late fees? Show all work.

3) (25 points) State the Law of Comparative Advantage. Prove it mathematically. Does it mean we should have free trade or cut off all imports? Explain your logic.

4) (20 points) How does “enforcing property rights” lead to a faster growing economy?

5) (20 points) President Trump considered trying to pass a law which would mean patents would last longer. Why might that have been a good idea? Why might that have been a bad idea?

6) (15 points) What is meant by “human capital”? What are the two ways to get more of it?