

Problem Set 1
HONORS 259L

Due September 11 in class or by email.
(Two of these questions will be graded.)

- 1) You are considering a road trip to the Eastern Shore for Columbus Day. You are deciding among going to St. Michaels, to Ocean City or staying in College Park. (If you are not familiar with this trip, consult Googlemaps). For your travel costs, provide examples of avoidable fixed costs, variable costs and sunk costs. Do this for two cases, in case 1 you have to rent a car, in Case 2, you already own a car. (Note that to get to the Eastern Shore, you will need to cross the Bay Bridge which has a toll.)
- 2) You are considering getting up at 4am to join a group of friends bird-watching. Determine what type of cost (benefit) category the following fall into:
 - i) The pain of waking up so early.
 - ii) The cost of your 2 year old binoculars (original cost \$200, predicted lifespan, 4 years)
 - iii) The cost of disappointing your friends by not showing up.
 - iv) The cost of Petersons Bird-watching Guidebook which you do not currently own.
 - v) The number of hours being bored watching birds (you get to decide how long the outing lasts).
 - vi) The time cost of developing your interesting group of friends.
- 3) Suppose you are considering buying a brand new Honda Fit Sport w/ Navigation, well-fitted version priced at \$21,500. Edmunds.com lists used 2018 Honda Fit Sport with Navigation with 12,000 miles at \$19,400 which means you could probably sell it to the dealer at say \$18,300. Since cars drop in price as soon as they leave the lot, you can likely also assume that the amount a dealer would give you for the same car with 10 miles is about the same. The car gets 30 miles per gallon. Determine the fixed, variable and sunk costs of driving the car x miles for the first year
 - a) measured before you actually leave the lot
 - b) measured after you have paid for the car and drove it the ten miles home.
- 4) You have just spent 2 hours cleaning your kitchen. You will not clean for another week. You are considering whether to invite a friend to dinner resulting in a messy kitchen. Is the cleaning time a sunk cost? Should that factor in your decision to invite the friend? Why or why not?
- 5) (Optional) Suppose you are a producer of DVD blank disks. To produce Q units per month costs you $\$100 + 0.25Q^2$.
 - a) What are the fixed costs of production?
 - b) What are the marginal costs of producing discs when you are currently producing 10 units? 15 units? 20 units? 30 units?
 - c) What are the average costs of producing disks ($AC=TC/Q$) when you are currently producing 10 units? 15 units? 20 units? 30 units?