Name and Student ID: _____

Due 11 Nov 2014. You can turn in these pages or another printed version.

1. (3 points) Give an example (i.e., tell me a story) of "the small exploiting the great" in a common pool or public good setting. . . in your house, family, town, etc.

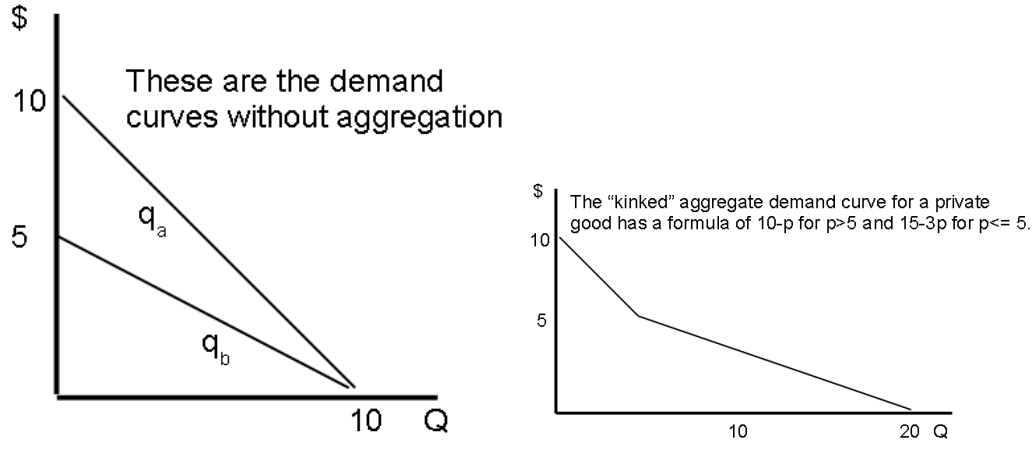
Solution: I will check stories to make sure that "the small" are free-riding to some extent on "the great." Example: I lived in a group house with 15 people, many of whom had their own "mini-kitchen" facilities. The large, common kitchen was absolutely filthy when I moved in, so I spent two days cleaning it. I hoped that others would take this hint as an excuse to keep the area clean (e.g., taking out the garbage or cleaning the floor), but they did not. Even worse, some people left their dirty dishes and rubbish around, perhaps assuming that "someone" would clean after them.

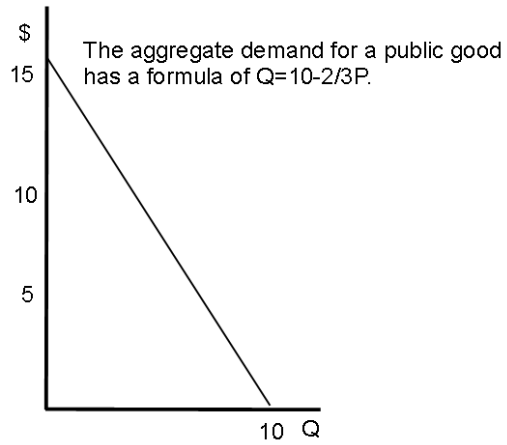
2. (3 points) Give an example of "collective action" to catch, exclude or punish defectors. . . in your house, family, town, etc.

Solution: I will check stories to make sure that defectors are caught or punished. Example: Students who come to late must pay a "fine" of cookies or chocolate. Although I am imposing the penalty, it is "collective" in the sense that others in the class support it.

3. (4 points) Ana and Bob have demand curves of $Q_a = 10 - p$ and $Q_b = 10 - 2p$, respectively.
   (a) (2 points) Draw two aggregate demand curves, one *as if* the good is a private good and one *as if* it is a public good.

Solution:





(b) (1 point) At what price is quantity demanded equal to one unit, for *each* good? Who pays for the private good? Who pays for the public good?

Solution: Ana will buy one unit of the private good at p=9. Ana and Bob together will demand one unit of the public good at a price of less than 13.50, but neither will pay THAT price on their own, unless their desire for the ticket outweighs their concern over free riding (i.e., the small exploits the great). Note that you cannot charge half that price to each, as 6.75 is more than Bob's WTP (demand). I did not mention a COST of supply, but it's important to know the difference among cost, price and WTP. Also note that outsiders do not know WTP (demand curve) in "real life," i.e., difference between blackboard and real economics.

(c) (1 point) How might you charge money for one unit of each good? Assume that you want to charge a price equal to willingness to pay.

Solution: Just let price ration demand for the private good. For the public good, it's tricky due to free-riding. You could perhaps have an "all or nothing" auction in which the good is provided if the sum of bids submitted in *sealed* envelopes meets/exceeds the value on the demand curve but NOT provided if the sum is too low. (This game wold not change by too much if bids only had to exceed cost. If cost is low enough to invoke "smalls exploit the great," then it COULD work, but the great may not like that!) Also note that charges based on WTP are rarely used for public goods, which are often funded via "ability to pay," e.g., income taxes.