

Experiment 6

1. If the production and sale of a good causes a positive externality, the total profits of buyers and sellers are maximized by a competitive equilibrium.

Answer: False

2. If the production and sale of a good causes a negative externality, a tax on the sale of that good can increase total profits.

Answer: True

3. Residents of the town of Los Locos (population 100) like to drive noisy offroad vehicles, but they hate the disturbance and dust caused by each others' vehicles. Each vehicle that is purchased by a resident causes \$20 worth of damage to each of the 100 residents. There are 20 residents who are willing to pay up to \$4,000 for an offroad vehicle. There are 30 residents who are willing to pay up to \$3,000 for an offroad vehicle and there are 50 residents who are willing to pay up to \$2,500 for an offroad vehicle. The price of offroad vehicles is \$1,200. In the absence of any governmental interference, how many residents of Los Locos would buy offroad vehicles?

- (a) 0
- (b) 20
- (c) 50
- (d) 80
- (e) 100

Answer: E

4. In the town of Los Locos described in question 3, how many residents would support a ban on offroad vehicles?

- (a) 0
- (b) 20
- (c) 50
- (d) 80
- (e) 100

Answer: D

5. Suppose that the town of Los Locos imposes a tax of \$2,000 on every resident who buys an offroad vehicle and the town distributes the revenues collected from the tax equally among all residents of Los Locos. With the tax in place, how many people in Los Locos will buy offroad vehicles and how much tax revenue will the government distribute to each resident?

- (a) 50 residents will buy offroad vehicles and each resident will get a rebate of 1,000.

- (b) 20 residents will buy offroad vehicles and each resident will get a rebate of \$400.
- (c) Nobody will buy an offroad vehicle and there will be no rebates.
- (d) Everybody will buy an offroad vehicle and everyone will get a rebate of \$2,000.
- (e) None of the above.

Answer: B

6. The residents of Los Locos decided to vote on whether to impose a tax of \$2,000 on each offroad vehicle purchaser. Who would gain and who would lose from the tax on offroad vehicles?
- (a) The residents with \$2,500 buyer values would be better off and the other residents would be worse off.
 - (b) Every resident would be worse off.
 - (c) The residents with \$4,000 buyer values would be better off and the other residents would be worse off.
 - (d) The residents with \$4,000 buyer values would be just as well off and other residents would be better off.
 - (e) The residents with \$4,000 buyer values would be worse off, the residents with \$3,000 buyer values would be exactly as well off, and the residents with \$2,500 buyer values would be better off.

Answer: D

7. Sweet Harmony, Oregon has 100 families. Forty of those families have a child, and 60 do not. Twenty of the families with a child are willing to pay as much as \$6,000 to educate their child, and the other twenty are willing to pay as much as \$4,000. Each educated child creates a positive externality of \$25 for each family in Sweet Harmony. The cost of educating a child is \$5,000. If each family must pay the cost of educating its child, what is the total profit all families derive from the education of Sweet Harmony's children?
- (a) \$30,000
 - (b) \$40,000
 - (c) \$70,000
 - (d) \$100,000
 - (e) \$120,000

Answer: C

8. The town council of Sweet Harmony is considering a proposal to provide a free public education to all children in the town. The total cost of this proposal would be \$200,000 ($\$5,000 \times 40$). To finance this cost, the council would tax each family \$2,000. If this proposal were enacted, what

would be the total profit to the residents of Sweet Harmony from educating its children?

- (a) \$30,000
- (b) \$40,000
- (c) \$70,000
- (d) \$100,000
- (e) \$120,000

Answer: D

9. If the proposal for free public schools in Sweet Harmony were put to a vote, how many families would vote in favor of it?

- (a) 20
- (b) 40
- (c) 60
- (d) 80
- (e) 100

Answer: B

10. Another proposal is to pay each family a subsidy \$1,200 if they pay for their child's education. The school would still cost each family \$5,000 for a net cost after the subsidy of \$3,800. The subsidy would be financed by a tax on residents. How many families would favor this proposal over the status quo described in question 7?

- (a) 20
- (b) 40
- (c) 60
- (d) 80
- (e) 100

Answer: E