

Quiz #3 (answers)
ECNS 432
Spring 2021

Name _____

Suppose we have a three-person neighborhood consisting of a gardener named Arnold and his neighbors Sylvester and Jean Claude. Arnold plants flowers in his garden every year because he gets benefits from being able to enjoy a nice-looking yard. In addition, Sylvester also gets benefits from being able to enjoy the flowers that Arnold plants. However, Jean Claude has bad allergies and the pollen from the flowers make his allergies worse. Assume that Arnold gets \$100 of benefits from each batch of flowers that he plants. Also, assume that Sylvester gets \$50 in benefits from each batch of flowers that Arnold plants. Lastly, assume that Jean Claude's allergy medication costs increase \$20 for each batch of flowers that are planted. In addition, suppose that Arnold faces the following marginal cost schedule for planting flowers:

<u>Q(# of batches of flowers)</u>	<u>Arnold's MC</u>
1	25
2	40
3	65
4	80
5	100
6	125
7	150
8	180

1.) Due to Arnold's extremely thick accent he cannot communicate with his neighbors (i.e. transaction costs to communication and negotiation are prohibitively high). How many batches of flowers will Arnold plant? Is this outcome socially efficient? Why or why not?

Arnold will plant to the point where his pvt. MC = pvt. MB. He plants 5 batches of flowers.

This is not socially efficient b/c this is not taking into consideration benefits/costs to the other guys.

2.) Now assume Sylvester and Jean Claude each have an interpreter so they can understand Arnold. Assume the interpreters are free of charge so communicating with each other is now costless (i.e. transaction costs are zero). How many batches of flowers will Arnold plant? Is this outcome efficient?

Now, Arnold will plant to the point where soc.MC = soc.MB. Thus he plants 6 batches. This is efficient because all mutually beneficial gains from trade have been exhausted.