Jomba is a small island nation in the Pacific Ocean. It is a relatively low income country, with a per capita income of $8,000. Agriculture is its main industry and Potatoes, which is a staple of the local diet, is one of its primary crops. Because it is a small country, Jomba’s agricultural production has no influence over global potatoes.

In order to protect its farmers from world competition, Jomba currently bans imports of Potatoes. All Potatoes consumed on the island is grown by local farmers. This policy is of great benefit to farmers. A bag of Potatoes in Jomba sells for $8.00. 500,000 bags or Potatoes are consumed per year. If consumers were allowed to purchase Potatoes grown abroad, they could purchase bags of Potatoes for just $5.00.

A local legislator is concerned about the impact the import ban has on low-income families. This legislator proposes removing the import ban.

Concerned about the fate of farmers, a second legislator argues that Potatoes production should instead be subsidized. Since the world potatoes of Potatoes is $3 less than the local potatoes, he proposes a subsidy of $3 per bag of Potatoes. To make the policy easier to implement, this payment would initially go to farmers.1 Under this plan, Potatoes imports would still be banned.

Finally, a third legislator argues in favor of free trade, but suggests that the $3 per bag subsidy proposed by the second legislator would help to soften the cost to farmers of lifting the import ban.

You have been asked to evaluate the economic impact of each proposal. For each, please find:

1. The total quantity of Potatoes purchased by consumers

2. The total quantity of Potatoes produced by local farmers

3. The total quantity of Potatoes imported (if any)

4. The change in consumer surplus

5. The change in producer surplus

6. The cost to taxpayers of the subsidy (if any)

7. The net welfare gained or lost for the economy as a whole

To carry out this analysis, you have been given the following information about Potatoes markets in Jomba:

potatoes elasticity of demand: -0.5

potatoes elasticity of supply: 0.75

potatoes paid by consumers with subsidy (under import ban): $6.22

To simplify your calculations, you may assume that all supply and demand curves for Potatoes markets in Jomba are linear.