



## AP<sup>®</sup> Macroeconomics 2003 Sample Student Responses Form B

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Write in the box the number of the question you are answering on this page as it is designated in the examination.

Question 2

- a) With equal amounts of resources, Luna can produce more machines, than Ashna (40 compared to 10), so it has an absolute advantage in producing machines.
- b) With equal amounts of resources, Luna can produce more food, than Ashna (40 <sub>tons</sub> compared to 30 <sub>tons</sub>), so it has an absolute advantage in producing <sup>food</sup> machines.
- c) In order to produce one extra machine, Luna has to sacrifice one ton of food, while Ashna would have to sacrifice 3 tons of food for the same goal. Therefore, Luna has lower opportunity costs in <sup>the</sup> production of machines than Ashna, so it has a comparative advantage in the production of machines.
- d) In order to produce one extra ton of food, Ashna has to sacrifice  $\frac{1}{3}$  of a machine, while Luna would have to sacrifice 1 machine for the same goal. Therefore, Luna has higher opportunity cost in the production of food than Ashna, so Ashna has a comparative advantage in the production of food. So Luna will import food when the two countries trade.
- e) The <sup>acceptable</sup> terms of trade lie between the two opportunity costs of the countries. In this case, these terms are: one machine should cost something between 1 ton and 3 tons of food (including the price of 1 ton per machine and 3 tons per machine). One example of terms of trade is: 1 machine costs 2 tons of food.

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- (a) Luna. Since the opportunity cost of 1 machine is 1 ton of food, when the opportunity cost of 1 machine in Ashna is 3 tons of food.
- (b) Ashna. Since the opportunity cost of 1 ton of food is one-third of a machine when the opportunity cost of a ton of food in Luna is 1 machine.
- (c) Luna. Since the opportunity cost of ~~food~~ <sup>machine</sup> to ~~machine~~ <sup>food</sup> is lower than Ashna's.
- (d) ~~Ashna~~ <sup>Luna</sup>. Since ~~it~~ <sup>Ashna</sup> has lower opportunity cost of ~~machine~~ <sup>food</sup> to machine than Luna's.
- (e) Ashna can ~~import~~ <sup>export</sup> food to Luna and import machines. Both countries will be better off if Luna would trade 1 machine for about 1.5 tons of Ashna's food. That way, ~~Ashna~~ <sup>Luna</sup> can mainly produce machines and ~~Luna~~ <sup>Ashna</sup> mainly on food and trade. Then, Ashna will be able to get 2 machines for 3 tons of food and Luna with 1.5 tons of food for a machine.