



## AP<sup>®</sup> Macroeconomics 2002 Sample Student Responses

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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.

ZMACCLA,

2

(a) A reduction in the labor force participation rate means that the labor force has become smaller than it otherwise would be.

In turn, ~~this~~ this decrease in available resources causes a decrease (leftward shift) in aggregate supply, because fewer workers can produce less output.

(b) Because of the crowding out effect, an increase in the government deficit causes interest rates to rise. (The mechanism for this is that more bonds must be sold to finance government spending, reducing their price and forcing interest rates up to achieve a similar rate of return to bonds.) This increase in interest rates causes investment to fall (because fewer investment projects are profitable when compared to the interest payments needed to finance them), so the rate at which capital is produced falls. Decreased capital causes the long-run aggregate supply curve to decrease (shift left), or at least to ~~increase~~ increase less than it otherwise would, because less capital means future production possibilities are more limited.

(c) A decrease in the ~~total~~ amount of resources needed per good means that more goods can be produced ~~than~~ than before (assuming a fixed rate of resource consumption). This is equivalent to an outward (right) shift in <sup>long run</sup> aggregate supply.

(d) Increased education is a kind of increased investment, because it makes labor resources (people) more efficient. This causes long run aggregate supply to increase.

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

~~Since net exports and savings is equal to investment, an increase in the rate of savings means a rise in investment.~~

(e) Because  $GDP = \text{Income} = \text{consumption} + \text{savings}$  and  
 $GDP = \text{expenditures} = \text{consumption} + \text{investment} + \text{government spending} + \text{net exports}$   
 saving is equal to investment plus government spending and net exports.

Since saving is largely independent of government spending and net exports, a higher savings rate means that investment must rise. (~~cause~~ more money in banks can be lent out for the purpose of investment, among other things). In turn, investment increases the capital stock and increases long run aggregate supply.

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.)  $\downarrow$  Long-Run Aggregate Supply (LRAS) b/c a smaller labor supply.

b.) no change in LRAS, b/c lowered taxes affects disposable income and aggregate demand but not LRAS.

c.)  $\uparrow$  LRAS b/c lower ~~input~~ <sup>production</sup> costs.

d.)  $\uparrow$  LRAS b/c a larger, higher quality labor force would be more productive.

e.) no change in LRAS, would only affect disposable income and  $\therefore$  only aggregate demand.