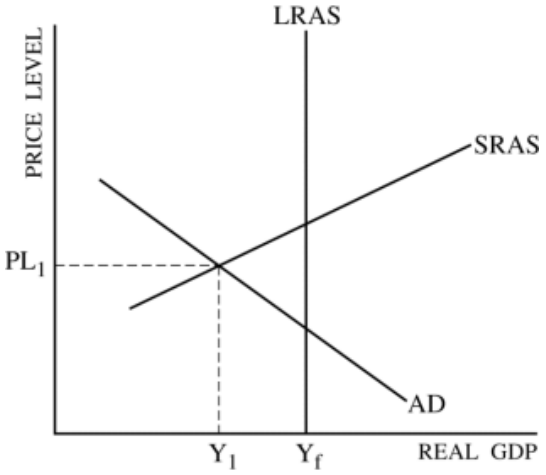
AP® MACROECONOMICS
2015 SCORING GUIDELINES

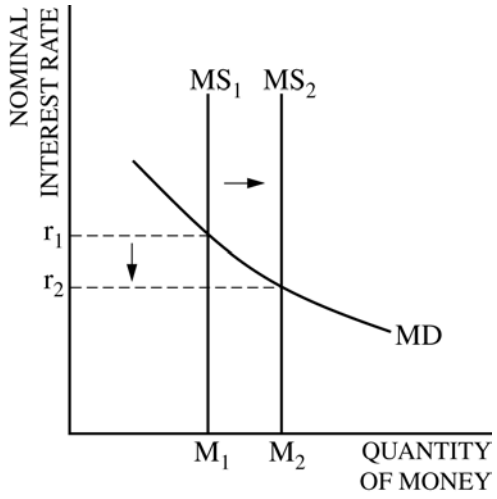
Question 1

10 points (2+1+2+3+2)



(a) 2 points:
- One point is earned for drawing a correctly labeled graph showing AD, SRAS, Y_1 and PL_1.
- One point is earned for drawing a vertical LRAS at Y_f to the right of Y_1.

(b) 1 point:
- One point is earned for stating that the Federal Reserve should target a lower federal funds rate.



(c) 2 points:
- One point is earned for drawing a correctly labeled money market graph.
- One point is earned for shifting the money supply curve to the right and showing a decrease in the nominal interest rate.

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Question 1 (continued)

(d) 3 points:

- One point is earned for calculating the minimum required change in government spending: $60 billion ($300/5=$60).
- One point is earned for stating that the minimum required change in taxes will be greater than the minimum required change in government spending.
- One point is earned for explaining that the tax multiplier (mpc/mps = 0.8/0.2 = 4) is smaller than the government spending multiplier (1/mps = 1/0.2 = 5) because part of the initial increase in disposable income caused by the decrease in income tax will be saved rather than spent.

(e) 2 points:

- One point is earned for stating that aggregate demand will increase and for explaining that lower income tax rates will increase disposable income and/or consumption and investment.
- One point is earned for stating that long-run aggregate supply will stay the same because lowering income taxes will increase consumption and/or investment, or there is no change in inputs.
  OR
  One point is earned for stating that long-run aggregate supply will increase in the long run because lowering taxes will increase savings and investment in physical capital, or because of increased incentives to work.
  OR
  One point is earned for stating that long-run aggregate supply will decrease in the long run because lowering taxes leads to a crowding out of private investment.

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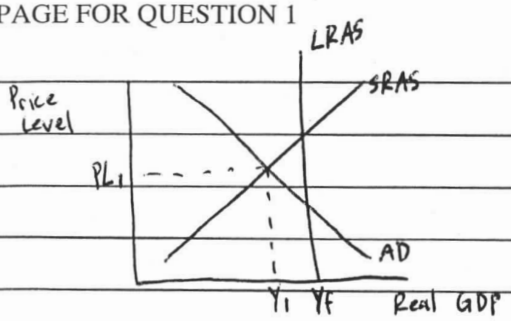
ANSWER PAGE FOR QUESTION 1

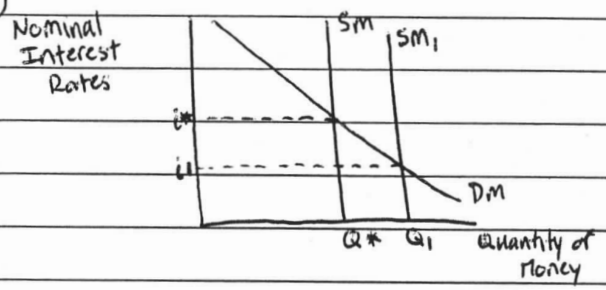
1A

1. a)



b) A lower federal funds rate

c)



d) i) $60 billion

ii) The minimum required change in taxes will be greater than the minimum required change in government spending, because changes in taxes are weaker than changes in spending and the tax multiplier is always less than the spending multiplier.

e) i) Aggregate demand will increase because consumption will increase due to the lower income tax rates.

ii) LRAS will stay the same because no change is being made to factors of production, education, technology, or trade.

GO ON TO THE NEXT PAGE.

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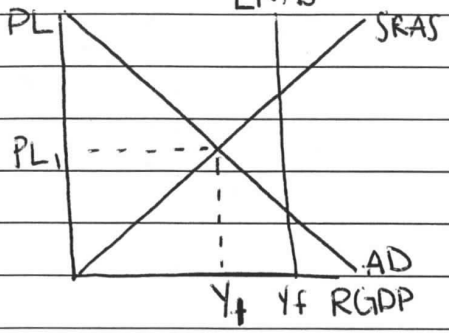
ANSWER PAGE FOR QUESTION 1

1B

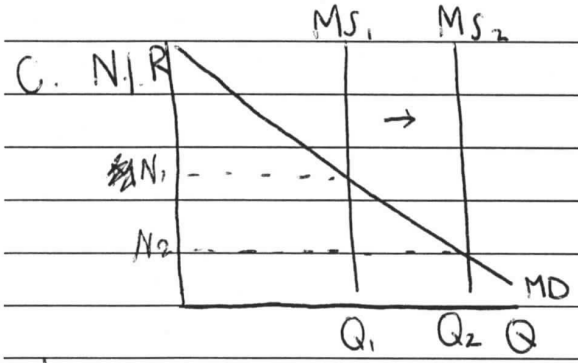
a. i

ii



b The federal Reserve should target a lower federal funds rate to reach full employement.

c.



d.

i $\frac{0.8}{10} \quad \frac{2}{10} = 5 \qquad \frac{5x}{5} = \frac{300}{5} \qquad x = 60$ billion to eliminate the recessionary gap

ii The minimum required change in taxes will be greater than to the minimum required change in government spending

e. i Aggregate demand will increase

ii Long-run aggregate supply will ~~increase~~ stay the same.

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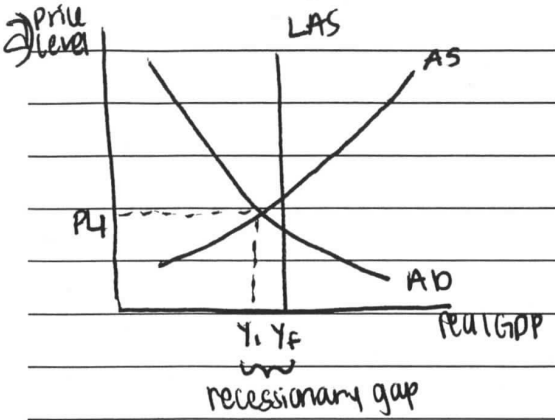
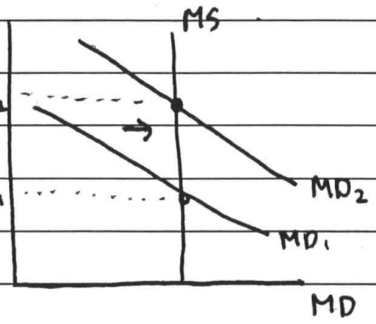
1.C 1



b) The federal funds rate should be higher.

c)



d) expansionary ↑G ↓T
contractionary ↓G ↑T

MPC = .8

$\frac{1}{MPS} = \frac{1}{.2} = 5$

recessionary gap = $300 bil

$60 billion
5 | 300

i) The government change in spending will be at a minimum of $60 billion

ii) The change in taxes will be equal to the change in government spending because in using fiscal ~~expansionary~~ policy there will be a change in either ~~or~~ taxes or government spending both with the same amount due to the multiplier.

e) i) Aggregate demand will increase because lowering tax rates will cause an expansion of the AD curve to the right in order to meet full employment and close the recession.

ii) The long run aggregate supply curve will remain the same because the fiscal policy being implemented to close the recessionary gap will have no effect on its shift because only spending will cause a change, or anything that affects aggregate supply will cause a change.

GO ON TO THE NEXT PAGE.

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AP® MACROECONOMICS
2015 SCORING COMMENTARY

Question 1

Overview

The question addressed the monetary and fiscal policy responses to a recession. Part (a) asked students to use the aggregate supply and demand model to graphically show an economy in recession. Part (b) asked whether the Federal Reserve should target a lower or higher federal funds rate in response to the recession. Part (c) required students to draw the money supply and demand model to show the effect of the monetary policy identified in part (b) on the nominal interest rate. In part (d) students were directed to calculate the minimum change in government spending necessary to close a given recessionary gap and to explain whether the minimum change in taxes necessary to close the same gap would be larger or smaller than the calculated change in government spending. Part (e) asked students to explain the effect of a decrease in income tax rates on aggregate demand and on long-run aggregate supply.

Sample: 1A
Score: 10

The student answered all parts of the question correctly and earned all 10 points.

Sample: 1B
Score: 7

The student did not earn 1 point in part (d)(ii) for failing to explain correctly that the tax multiplier is smaller than the government spending multiplier. The student did not earn 1 point in part (e)(i) for failing to explain correctly why the aggregate demand curve will increase. The student did not earn 1 point in part (e)(ii) for failing to explain correctly why the long-run aggregate supply will stay the same.

Sample: 1C
Score: 4

The student earned 1 point in part (a)(i) for drawing a correctly labeled graph showing aggregate demand, short-run aggregate supply, Y_1 and PL_1. The student earned 1 point in part (a)(ii) for drawing a vertical long-run aggregate supply curve at Y_f to the right of Y_1. The student earned 1 point in part (c) for drawing a correctly labeled money market graph. The student earned 1 point in part (d)(i) for calculating the minimum required change in government spending, $60 billion.

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