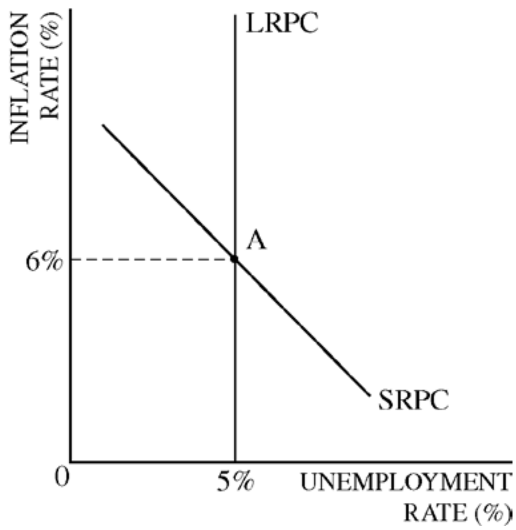
AP® MACROECONOMICS
2009 SCORING GUIDELINES

Question 1

11 Points (2 + 1 + 1 + 2 + 2 + 3)

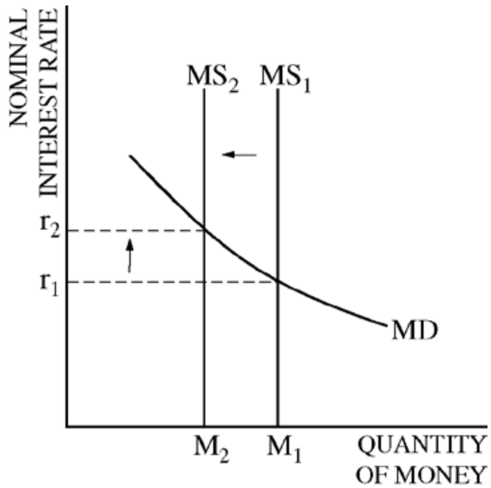


(a) 2 points:
- One point is earned for a correctly labeled graph of the short-run Phillips curve.
- One point is earned for showing position "A" on the LRPC at the correct coordinates where the SRPC crosses the LRPC curve.

(b) 1 point:
- One point is earned for the correct calculation of the real interest rate: 8% - 6% = 2%.

(c) 1 point:
- One point is earned for stating that the Federal Reserve should sell bonds.

Question 1 (continued)



(d) 2 points:

- One point is earned for a correctly labeled graph of the money market.
- One point is earned for showing a leftward shift of the money supply curve resulting in a higher interest rate.

(e) 2 points:

- One point is earned for stating that aggregate demand decreases.
- One point is earned for explaining that the higher interest rate decreases investment and interest-sensitive consumption spending, and that both consumption and investment are components of aggregate demand.

(f) 3 points:

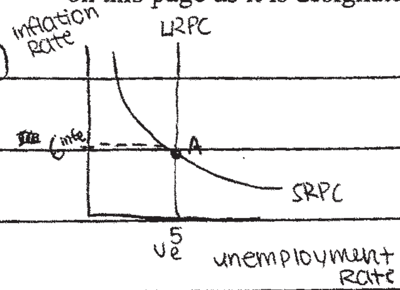
- One point is earned for stating that the short-run Phillips curve will shift to the left.
- One point is earned for explaining that Federal Reserve policy will lower inflationary expectations.
- One point is earned for stating that the natural rate of unemployment will remain unchanged.

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

1.

1A

a)

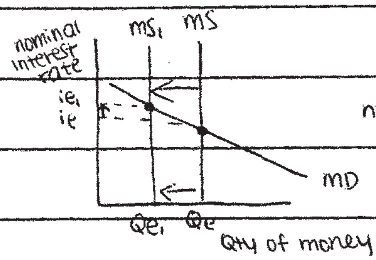


b) Real interest rate = nominal − inf

= 8 − 6 = $\boxed{\text{2 percent}}$

c) sell bonds

d)



nominal interest rate will increase.

e) since the interest rate increased, investment will decrease. Since investment is a component of Aggregate demand, decrease in investment will decrease aggregate demand and aggregate demand curve will shift to the left.

f) i The short run Phillips curve will shift to the left since the expected inflation rate decreased from 6% to 3%.

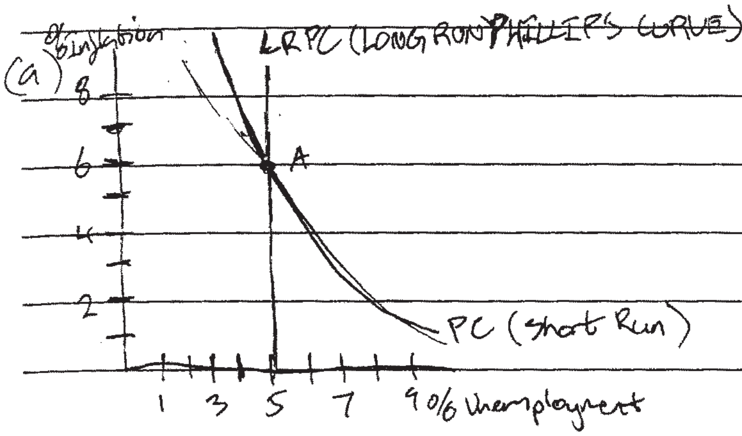
ii The natural rate of unemployment will stay the same.

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

Question 1

1B
(1+2)

(a)



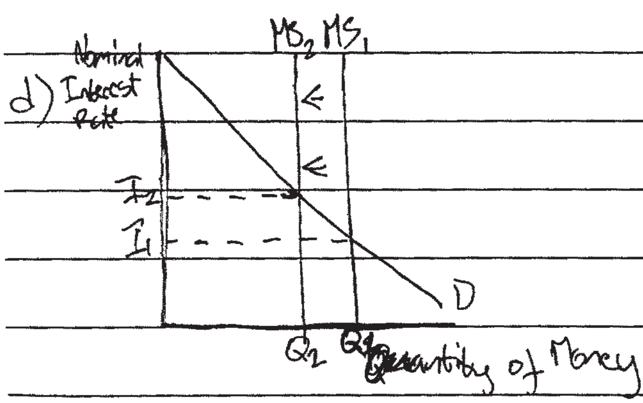
b) Real IR = Nominal IR - Inflation

= 8 - 6

= 2%

c) The Federal Reserve should buy bonds

d)



e) Aggregate demand will decrease in the short ~~run~~. This is because increased nominal interest rates will discourage investment spending ~~by~~ making investment more expensive. Investment is a component of ~~a~~ aggregate demand and therefore aggregate demand will decrease.

Question 1

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

1B (2 of 2)

f)

(i) The economy will move to a point lower on the short run Phillips curve because inflation will decrease from 6% to 3% and there will be an increase in unemployment

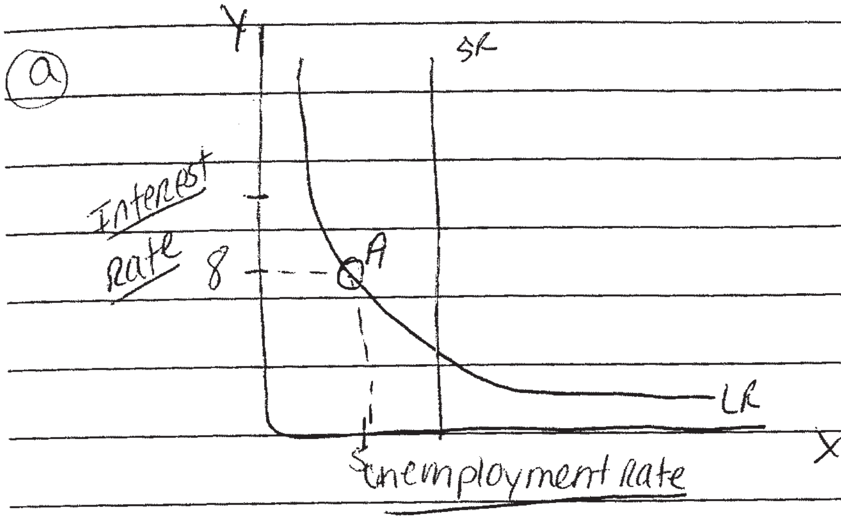
(ii) The natural rate of unemployment will shift to the left

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

1

RC
(1 of 2)

(a)



SR - short run
LR - long run

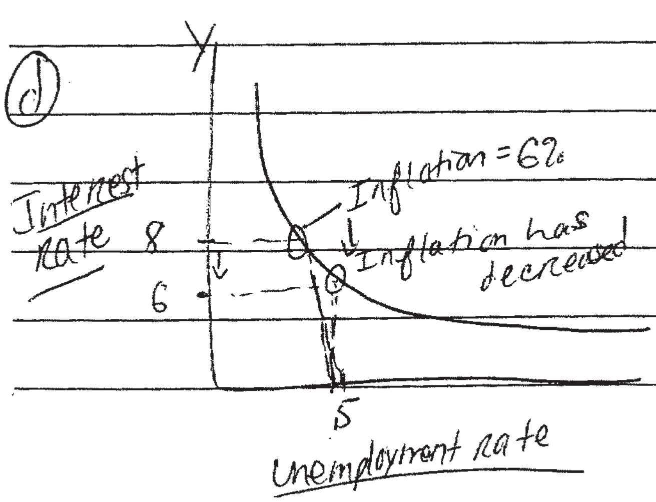
(b) real interest rate in the long-run equilibrium = 7%

nominal = 8% - (6% - 5%) = 7%

(c) The Federal Reserve should take part in selling bonds/securities in the open market. By doing this, the money supply in the open market will decrease and therefore, inflation will be brought down as well.

→ Interest will also decrease with less money in the open market.

(d)

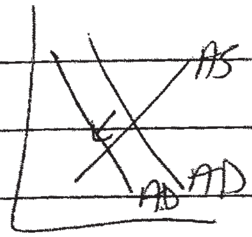


#1

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

1 C
(2 of 2)

(e) In the short run, this interest rate change will affect aggregate demand by decreasing it as well. The shift in the aggregate demand (AD) slope is caused by a change in price or interest and a lower interest rate correlates with ~~lower~~ a decreased aggregate demand.



(Overall, inflation is lowered so less money will be mixed in among the open market.)

(f.) (i) The short-run Phillips curve's equilibrium will be reached at some point. This is because, originally, the short-run curve has a lower equilibrium given a lower interest rate. Because inflation is decreasing, equilibrium on the short-run Phillips curve can be achieved.

(ii) The natural rate of unemployment will decrease as well. More labor will be needed because aggregate demand will be decreased, which will bring down supply. As the natural rate of unemployment approaches long-run equilibrium, the aggregate demand will increase first, calling for more labor in the workforce

AP® MACROECONOMICS
2009 SCORING COMMENTARY

Question 1

Overview

This question determined students' ability to work with Phillips curves and graphs of the money market. Part (a) asked students to draw a long-run equilibrium on the Phillips curve diagram. Part (b) determined whether students knew the relationship between nominal and real interest rates. Part (c) tested students' understanding of how the Federal Reserve uses open-market operations to influence the inflation rate. Part (d) tested students' ability to draw and manipulate the money-market graph. Part (e) asked students to identify the short-run relationship between interest rates and aggregate demand. Part (f) determined whether students knew how the Phillips curve adjusts in the long run and if they understood that the natural rate of unemployment remains the same during these adjustments.

Sample: 1A
Score: 11

The student earned all 11 points for this question.

Sample: 1B
Score: 6

The student lost 1 point in part (c) for stating that the Federal Reserve should buy bonds. The student lost 1 point in part (d) for shifting the money supply curve to the left, which is inconsistent with the answer "buy bonds" in part (c). The student lost all 3 points in part (f).

Sample: 1C
Score: 1

The student earned 1 point in part (c) for stating that the Federal Reserve should sell "bonds/securities."