

AP[®] MACROECONOMICS
2008 SCORING GUIDELINES (Form B)

Question 3

7 points (1 + 2 + 2 + 2)

(a) 1 point:

- One point is earned for calculating today's GDP = $(\$6 \times 400) + (\$2 \times 1,000) + (\$2 \times 800) = \$6,000$.

(b) 2 points:

- One point is earned for stating that the inflation rate is 50 percent $[(150-100)/100]$.
- One point is earned for calculating this year's real GDP = $\$6,000/1.5 = \$4,000$.

(c) 2 points:

- One point is earned for stating that real wages would fall.
- One point is earned for the explanation that the wages rose by only 20 percent as compared to the inflation rate of 50 percent, causing a 30 percent fall in real wages.

(d) 2 points:

- One point is earned for concluding that a borrower would be better off.
- One point is earned for the explanation that, due to the higher inflation, the borrower is paying back the loan using fewer real dollars.

Q3

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

3A

$$\textcircled{a} \text{ GDP} = P \times Q$$

$$\text{Nominal GDP} = 6 \times 100 + 2 \times 1000 + 800 \times 2$$

$$= 2400 + 2000 + 1600 = \$6000$$

$$\textcircled{b} \text{ Inflation rate} = \frac{(\text{GDP deflator this year}) - (\text{GDP deflator in base year})}{\text{GDP deflator in base year}} \times 100$$

$$\text{Inflation rate} = \frac{150 - 100}{100} \times 100 = \frac{50}{100} \times 100 = 50\%$$

$$\textcircled{ii} \text{ Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP deflator}} = \frac{6000}{150} \times 100 = \$4000$$

$$\boxed{\text{Real GDP} = \$4000}$$

Ⓒ Their real wages have decreased. This is because as inflation is higher than nominal increase in wages, the real wages will buy comparatively less by: $\boxed{\text{Nominal} - \text{Inflation} = \text{Real}}$

Ⓓ He or she would be better off. As GDP deflator increases, inflation will increase. When the borrower pays back his loan with the interest, in real value terms the borrower has paid less. This is because as inflation increases, the real value of money will decrease, so now the lender cannot buy as many goods as he could before the unexpected increase in inflation.

$$\begin{aligned} (a) \quad & 400 \times \$6 + 1000 \times \$2 + 800 \times \$2 \\ & = 2400 + 2000 + 1600 \\ & = 6000 \\ & \therefore 6000 \end{aligned}$$

(b)

$$(i) \quad \frac{150 - 100}{100} \times 100 = 50\%$$

$$\therefore 50\%$$

$$(ii) \quad 100 + 50 = 150$$

$$\therefore 150$$

(c). Their real wages decreased.

Although their nominal wages have increased 20%, since the inflation rate is 50% which is higher than the increased rate of nominal wages, the real wages actually have fallen.

(d). Increase in GDP deflator means that there was an inflation. And this ~~was~~ results in increase in real interest rate. So the borrower has to pay more than he or she promised initially. ~~\$~~

Consequently, there is no change in "real" point of view; however, he or she will be worse off in "nominal" point of view.

a)	400 loaves of bread	\$6	\$2400
	1,000 gallons of water	\$2	\$2000
	800 pieces of fruit	\$2	\$1600
			\$6000

$$\text{GDP} = \$6000$$

$$\text{b) } \frac{150}{100} = 1.5\%$$

$$6000 \times 1.5 = 9000$$

$$\text{i) } \therefore \% \rightarrow 1.5\%$$

$$\text{ii) Real GDP} = \$9000$$

c) The wages that were received in the base year will increase by the same percentage, as the real wages is proportional to real GDP. If GDP increases, workers will demand ~~and~~ an increase in wages.

d) The borrower would be worse off as the interest rate has increased, therefore money to ~~be~~ returned will much more than expected. The GDP deflator would

AP[®] MACROECONOMICS
2008 SCORING COMMENTARY (Form B)

Question 3

Sample: 3A

Score: 7

The student earned all points in this question.

Sample: 3B

Score: 4

The student earned the point in part (a). In part (b) the student earned 1 point for calculating the inflation rate correctly; however, 1 point was not earned because the real GDP result is incorrect. Both points in part (c) were earned. Neither point was earned in part (d) because the student states that the borrower will be worse off.

Sample: 3C

Score: 1

The student earned the point in part (a). The student did not earn the points in part (b) because the inflation rate and real GDP are incorrect. The points in part (c) were not earned because the student implies that the real wages do not change. Neither point was earned in part (d) because the student states that the borrower will be worse off.