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# AP Macroeconomics

## Sample Student Responses and Scoring Commentary

### **Inside:**

#### **Free Response Question 3**

- Scoring Guideline**
- Student Samples**
- Scoring Commentary**

**AP<sup>®</sup> MACROECONOMICS  
2018 SCORING GUIDELINES**

**Question 3**

**5 Points (1 + 1 + 1 + 2)**

(a) 1 point:

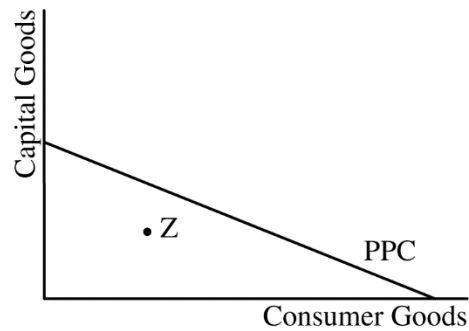
- One point is earned for stating that neither country has a comparative advantage in producing consumer goods and for explaining that the opportunity cost of producing 1 unit of consumer goods is the same for both countries (which is 1/2 a unit of capital goods).

(b) 1 point:

- One point is earned for correctly calculating the unemployment rate as 10 percent ( $20,000/200,000 \times 100 = 10\%$ ).

(c) 1 point:

- One point is earned for correctly calculating the labor force participation rate as 66.67 percent ( $200,000/300,000 \times 100 = 66.67\%$ ).



(d) 2 points:

- One point is earned for drawing a correctly labeled graph of the production possibilities curve (PPC).
- One point is earned for correctly showing point Z below the PPC.

3A

ANSWER PAGE FOR QUESTION 3

a)	Consumer	Capital	(Inputs)
X	$1/2 = 1/2$	$2/1 = 2$	
Y	$2/4 = 1/2$	$4/2 = 2$	

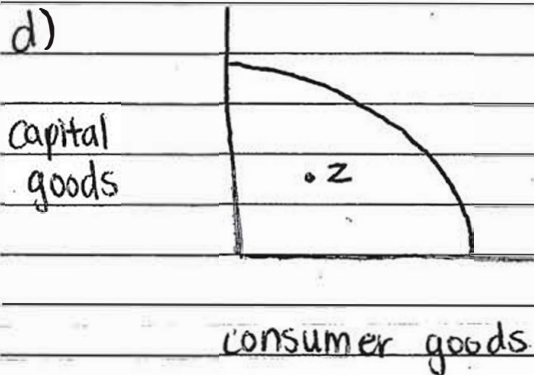
Neither country has comparative advantage in production of consumer goods since both country's opportunity cost for producing consumer goods are the same.

b) Unemployment	$\times 100$	$10\ 000 + 5000 + 5000 = 20\ 000$
Labour force		$180\ 000 + 20\ 000 = 200\ 000$

$$\frac{20\ 000}{200\ 000} = \frac{1}{10} \times 100 = 10\% \text{ unemployment rate}$$

c) Labour force	$\times 100$	$20\ 000 + 180\ 000 = 200\ 000$
population		$100\ 000 + 200\ 000 = 300\ 000$

$$\frac{200\ 000}{300\ 000} = \frac{2}{3} \times 100 = 66.67\% \text{ labor force participation rate}$$



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ANSWER PAGE FOR QUESTION 3

	consumer	capital
a) Country X	1 hr	2 hr
Country Y	2 hr	4 hr
	X - 1 con = .5 cap	
	1 con = 2 cap	
INPUT!	1 cap = 2 con	
	1 cap = 2 con	

Country Y has the comparative advantage in consumer goods because their tradeoff in input time to make a unit of consumer goods is lower than that of Country X.

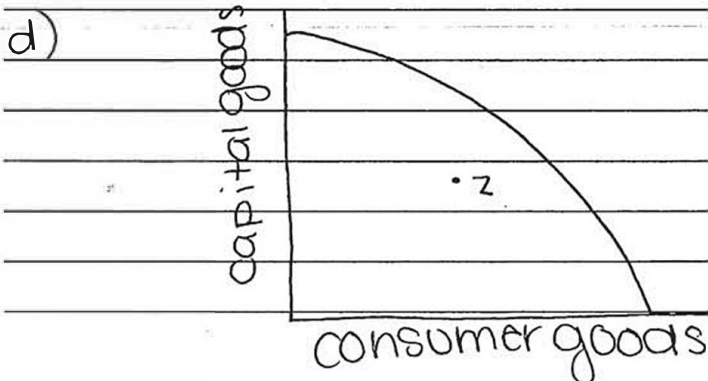
b)  $180,000 + 10,000 + 5,000 + 5,000 = 200,000$  in labor force

$10,000 + 5,000 + 5,000 = 20,000$  unemployed

$\frac{\text{unemployed}}{\text{labor force}} = \text{unemployment rate}$

$\frac{20,000}{200,000} = 10\%$  unemployment rate

c)  $\frac{180,000 \text{ employed}}{200,000 \text{ labor force}} = 90\%$  labor force participation rate



cyclical = recession

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## ANSWER PAGE FOR QUESTION 3

a.) Country X has comparative advantage because 1 hour is less than 2 hours

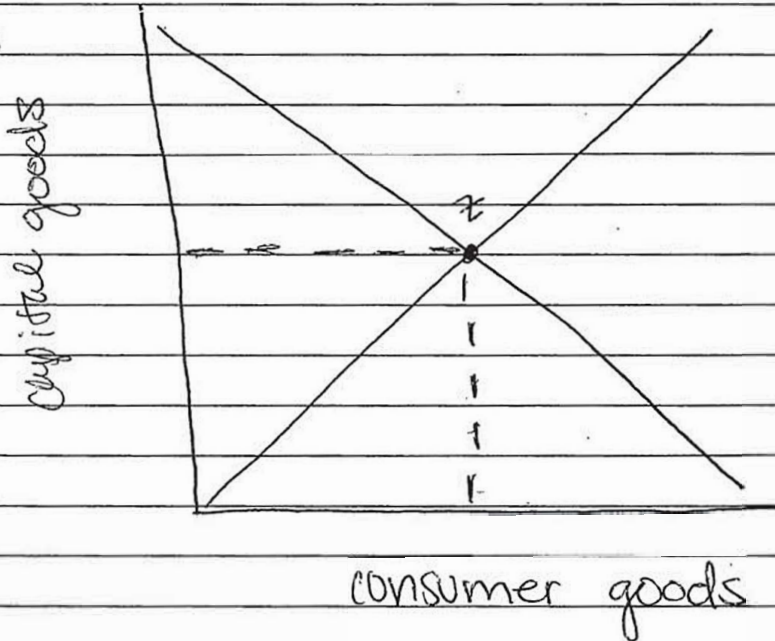
b.) 10% unemployment rate

$$\frac{20,000 \text{ unemployed}}{200,000 \text{ total labor force}} = 10\%$$

c.) The labor force participation is 200,000

$$\begin{array}{l} 20,000 \rightarrow \text{unemployed} \\ + 180,000 \rightarrow \text{employed} \\ \hline 200,000 \rightarrow \text{labor force} \end{array}$$

d.)



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# AP<sup>®</sup> MACROECONOMICS

## 2018 SCORING COMMENTARY

### Question 3

#### Overview

The question examined students' knowledge about opportunity cost and comparative advantage as well as employment statistics. In part (a) students were given information about opportunity cost and asked to identify and explain whether Country X or Country Y had a comparative advantage in the production of consumer goods. The next two parts of the question asked the students to use labor market data for Country X to calculate the unemployment rate in part (b) and the labor force participation rate in part (c). Finally, part (d) asked the students to draw a correctly labeled graph of the production possibilities curve (PPC) for Country X and to label a point (Z) that reflected the current level of unemployment the students had calculated in part (b).

#### Sample: 3A

**Score: 5**

The student answers all parts of the question correctly and earned all 5 points.

#### Sample: 3B

**Score: 3**

The student did not earn 1 point in part (a) because the response incorrectly states that Country Y has the comparative advantage. The student did not earn 1 point in part (c) because the response provides an incorrect calculation of the labor force participation rate.

#### Sample: 3C

**Score: 1**

The student earned 1 point in part (b) for a correct calculation of the unemployment rate.