

Economics
Higher level
Paper 3

Wednesday 3 May 2017 (morning)

Candidate session number

1 hour

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Instructions to candidates

- Write your session number in the boxes above.
- You are permitted access to a calculator for this paper.
- Do not open this examination paper until instructed to do so.
- Answer two questions.
- Answers must be written within the answer boxes provided.
- Unless otherwise stated in the question, all numerical answers must be given exactly or correct to two decimal places.
- You must show all your working.
- The maximum mark for this examination paper is **[50 marks]**.



Please **do not** write on this page.

Answers written on this page
will not be marked.



Answer **two** questions. Each question is worth [25 marks]. Answers must be written within the answer boxes provided.

1. For Firm A, the relationship between inputs and output can be expressed as follows:

Table 1

| Land | Labour | Capital | Output |
|------|--------|---------|--------|
| 1 | 20 | 6 | 800 |
| 2 | 40 | 12 | 1800 |
| 3 | 60 | 18 | 3000 |
| 4 | 80 | 24 | 4000 |
| 5 | 100 | 30 | 4800 |
| 6 | 120 | 36 | 5500 |

(a) Define the term *increasing returns to scale*. [2]

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(b) Using the data in **Table 1** to support your answer, identify how changes in inputs may result in constant returns to scale **and** in decreasing returns to scale. [2]

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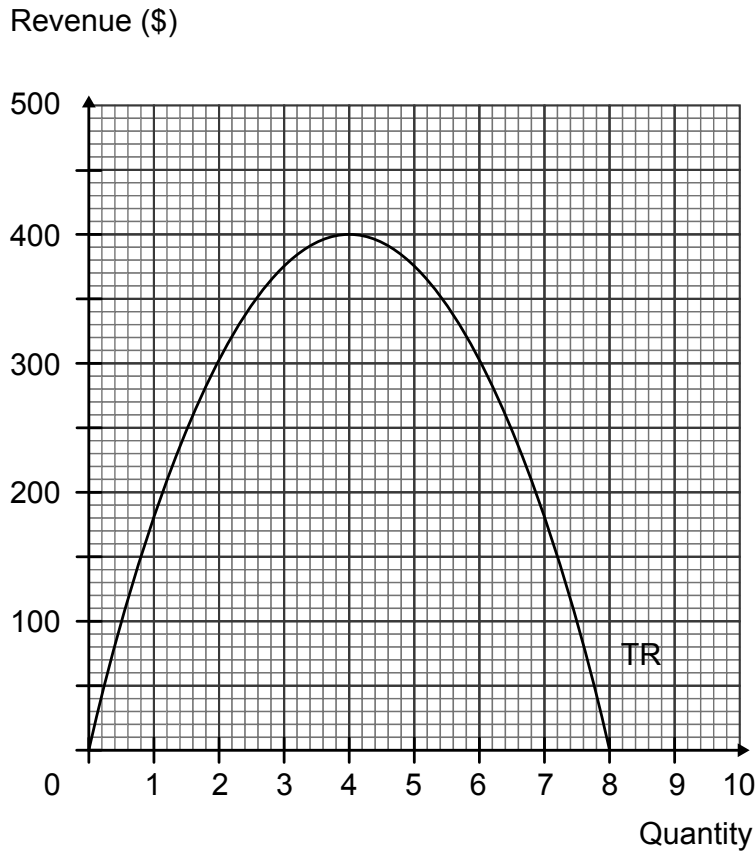
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Turn over

(Question 1 continued)

Consider a monopolist facing a downward sloping, straight line demand curve. The following diagram illustrates the total revenue (TR) curve faced by the monopolist.



(c) Determine:

(i) marginal revenue when output is equal to 4 units.

[1]

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(ii) average revenue when output is equal to 6 units.

[1]

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(Question 1 continued)

(iii) economic profit if output is equal to 2 units and average cost is equal to \$130 per unit.

[1]

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The following table illustrates the demand conditions faced by another monopolist.

Table 2

| Price per unit (\$) | Quantity demanded per week (units) |
|---------------------|------------------------------------|
| 12 | 0 |
| 10 | 12 |
| 8 | 24 |
| 6 | 36 |
| 4 | 48 |
| 2 | 60 |

(d) Calculate the marginal revenue resulting from a fall in price from \$8 to \$6.

[2]

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(e) Calculate the price elasticity of demand when price falls from \$10 to \$8.

[2]

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will not be marked.



(Question 1 continued)

- (f) Explain why a profit-maximizing monopolist would never choose to operate on the inelastic portion of its demand curve.

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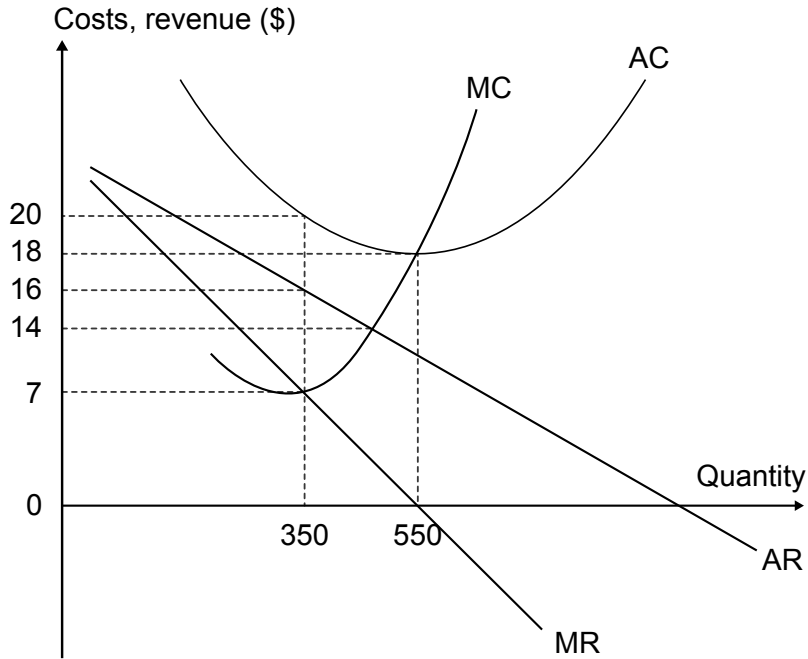
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(Question 1 continued)

Firm B operates in a monopolistically competitive market. The following diagram illustrates the marginal cost (MC), average cost (AC), average revenue (AR) and marginal revenue (MR) curves it faces. The diagram is not drawn to scale.



(g) State **two** characteristics of monopolistic competition. [2]

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(h) Calculate Firm B's short-run profit/loss at the profit-maximizing level of output. [2]

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(Question 1 continued)

- (i) Using the diagram on page 8, explain how long-run equilibrium will be reached. [4]

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- (j) With reference to the diagram on page 8, outline whether allocative efficiency will be achieved in the long run in a monopolistically competitive market. [2]

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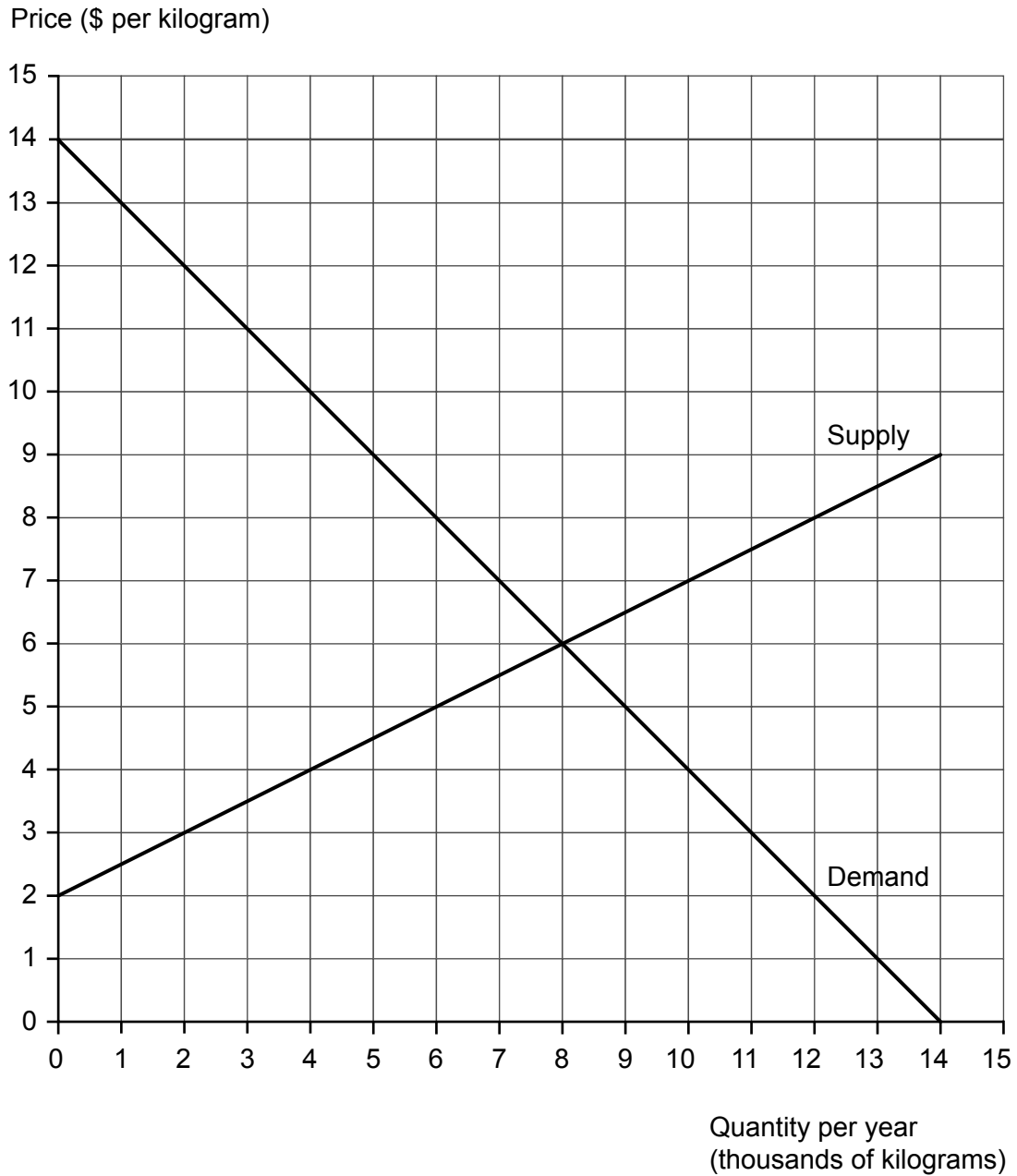
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2. The following diagram illustrates the domestic market for rice in Country Alpha. This diagram will be used for several of the following questions.



- (a) Calculate the social surplus at the equilibrium market price.

[2]

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(Question 2 continued)

The government in Alpha imposes a price ceiling of \$5 per kilogram.

- (b) (i) Calculate the resulting shortage in the market. [1]

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- (ii) Calculate the change in the consumer surplus after the imposition of the price ceiling. [2]

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- (iii) Calculate the welfare loss after the imposition of the price ceiling. [2]

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A new government in Alpha decides to abolish the price ceiling. Instead, it opens the rice market to imports. The world supply of rice is perfectly elastic; any quantity can be bought for \$3 per kilogram.

- (c) Using the diagram on page 10, calculate the import expenditures on rice. [2]

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(Question 2 continued)

(d) (i) Define the term *comparative advantage*. [2]

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(ii) Explain **two** limitations of the theory of comparative advantage. [4]

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(e) Alpha's government decides to impose a \$2 tariff on each kilogram of imported rice. Using the diagram on page 10, calculate the government revenue that results from the imposition of the tariff. [1]

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(Question 2 continued)

The following table provides selected data from the balance of payments for Alpha for 2016.

Table 1

| | \$ (million) |
|-----------------------|---------------------|
| Net capital transfers | -288 |
| Net current transfers | -170 |
| Net direct investment | 361 |
| Exports of services | 409 |
| Imports of goods | 829 |
| Net investment income | 144 |
| Imports of services | 435 |
| Exports of goods | 852 |

- (f) (i) Using the data in **Table 1**, calculate Alpha's current account balance for 2016. [2]

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- (ii) Outline how Alpha's current account balance for 2016 is likely to affect the exchange rate of its currency. [2]

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(Question 2 continued)

- (g) (i) State **one** way in which the government of Alpha might bring about a depreciation of its currency. [1]

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- (ii) Following the depreciation, it is observed that the current account balance worsens initially, but improves after a certain period of time. Explain why this might be expected to happen. [4]

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3. (a) Distinguish between inflation and disinflation. [2]

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The following information relates to Country A.

Table 1

| | Consumer price index (CPI) | Inflation rate (%) |
|------|-----------------------------------|---------------------------|
| 2012 | 151.58 | |
| 2013 | 156.28 | |
| 2014 | 158.93 | 1.70 |
| 2015 | 156.07 | |

(b) (i) Calculate the inflation rate for 2013 **and** for 2015 for Country A. Enter your results in **Table 1**. [2]

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(ii) Identify the year in which Country A experienced disinflation. [1]

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(Question 3 continued)

- (c) (i) The consumer price index (CPI) is a weighted price index. Outline **one** reason why weights are used in the construction of the CPI. [2]

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- (ii) Determine the percentage change in the CPI of Country A between the base year and 2013. [1]

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- (d) Outline how a producer price index may prove useful in predicting future inflation. [2]

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(Question 3 continued)

(e) Explain **two** reasons why governments attempt to avoid deflation.

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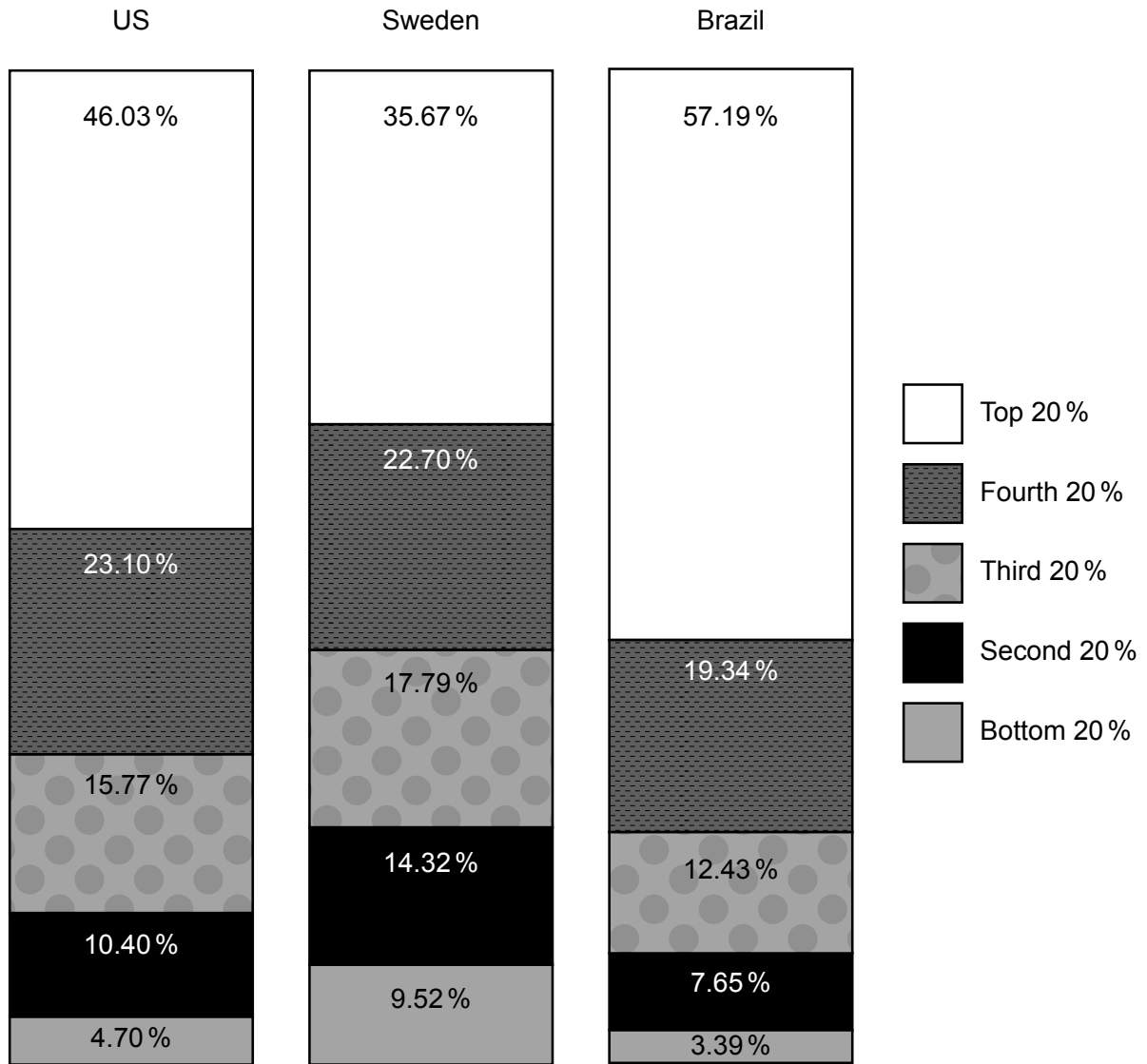
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(Question 3 continued)

The following data are income quintile shares for the United States (US), Sweden and Brazil in 2011.

Figure 1



(f) Using the data in **Figure 1**, comment on the degree of income inequality in the United States (US), Sweden and Brazil.

[2]

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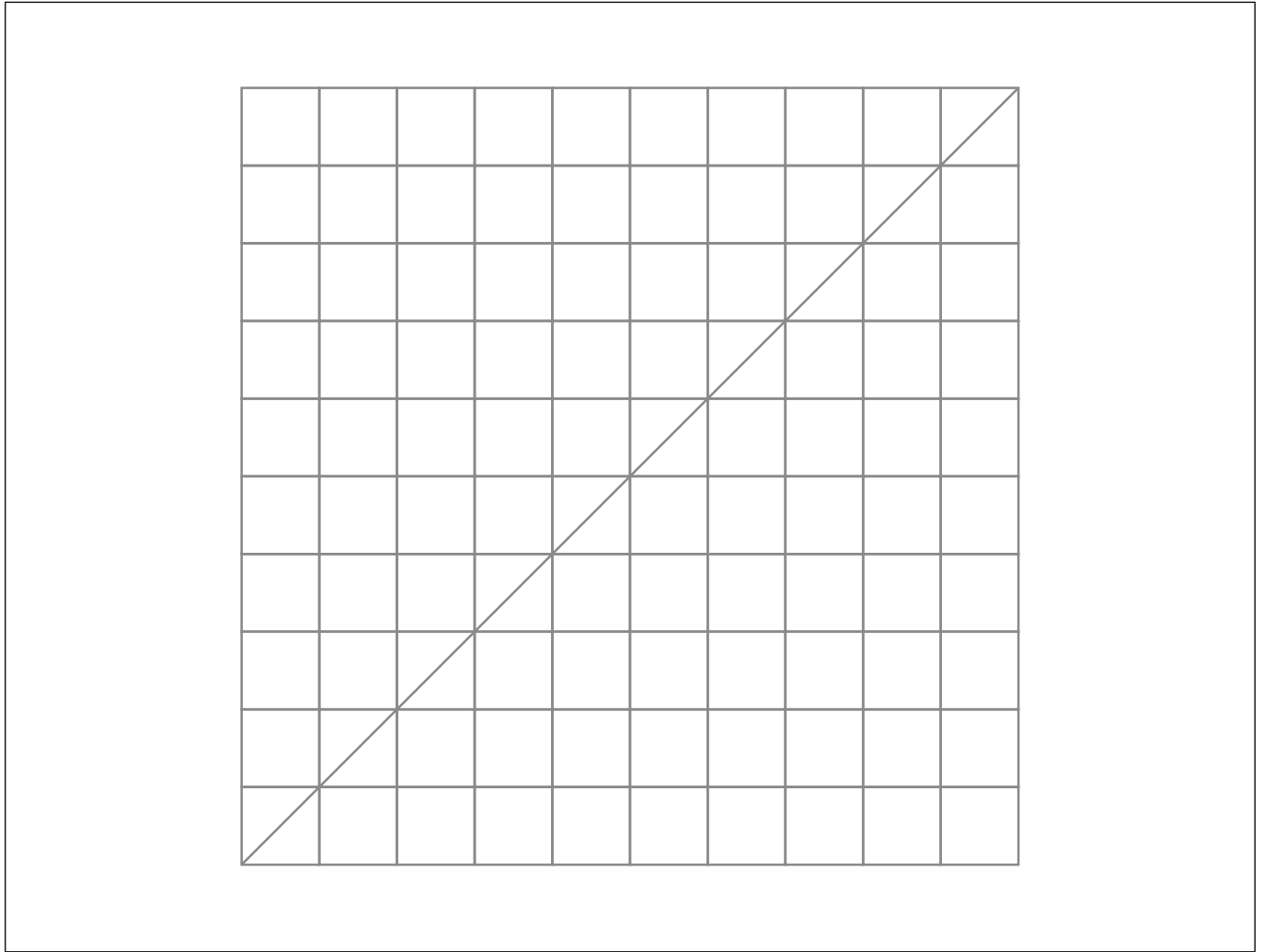
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(Question 3 continued)

- (g) (i) Using your answer to part (f), sketch and label a Lorenz curve for Brazil **and** for Sweden in the following box. [2]



- (ii) State whether the US, Sweden or Brazil has the highest Gini coefficient. [1]

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(Question 3 continued)

(h) Define the term *poverty trap* (*poverty cycle*).

[2]

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(i) Explain **two** reasons for which a highly unequal income distribution may prove a barrier to economic development.

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