1.13 Income and Cross Elasticities of Demand: Test Pack

Total Marks

AQA 7136 · Calculators not allowed · about 15 minutes

Name: _____ Date: ____ / ____ / _____

Answer all questions in full sentences where required. Show all working for calculations. Total time guidance 15 minutes.

1 Define the income elasticity of demand (YED) and state the formula, in the context of a household's response to income changes.

(Total for Question 1 is 1 mark)

2 If a good has YED = 0.6, state whether it is a necessity or a luxury and give a brief explanation using the magnitude.

(Total for Question 2 is 1 mark)

3 Which one of the following values of cross elasticity of demand is most likely for two close substitutes, such as two rival brands of the same kind of breakfast cereal?

- ☐ A) -1.8
- ☐ B) +0.05
- ☐ C) +2.4
- ☐ D) -0.1

(Total for Question 3 is 1 mark)

4 A supermarket expects average incomes to rise steadily over the next five years. Which one of its product lines is likely to see the greatest increase in demand as a result?

- ☐ A) Organic ready meals (YED = +1.9)
- ☐ B) Fresh potatoes (YED = +0.3)
- ☐ C) Value-range tinned beans (YED = -0.8)
- ☐ D) Standard sliced bread (YED = +0.1)

(Total for Question 4 is 1 mark)

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5 Calculate the cross elasticity of demand between coffee and tea when the price of tea rises from £10 to £12 and the quantity demanded of coffee increases from 200 cups to 240 cups. State whether they are substitutes or complements.

(Total for Question 5 is 2 marks)

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6 A supermarket estimates that the cross elasticity of demand between its own-brand cola and a leading branded cola is +1.4. The branded cola's price is expected to rise by 5%. Calculate the expected percentage change in demand for the own-brand cola and explain one implication for the supermarket. Show your working.

(Total for Question 6 is 4 marks)

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Mark scheme · 1.13 Income and Cross Elasticities of Demand: Test Pack

Question 1

a measure of how the quantity demanded of a good responds to a change in consumers' income, calculated as percentage change in quantity demanded divided by percentage change in income **B1**

Answer: YED = % change in quantity demanded / % change in income, measuring how demand responds to income changes.

Question 2

YED = 0.6 indicates a necessity because 0 < YED < 1, so demand rises with income but less than proportionately **B1**

Answer: Necessity; 0.6 is between 0 and 1 so demand rises with income but less proportionately.

Question 3

C cao **B1**

Answer: C

Question 4

A cao **B1**

Answer: A

Question 5

calculate % change in price of tea = (12 - 10) / 10 x 100 = 20%; % change in coffee demand = (240 - 200) / 200 x 100 = 20% **M1**

XED = 20% / 20% = 1.0, positive so coffee and tea are substitutes **A1**

Answer: XED = 1.0, positive; coffee and tea are substitutes.

Question 6

% change in quantity demanded = XED x % change in price = 1.4 x 5 **M1**

+7% **A1**

identifies an implication, e.g. the supermarket should expect demand for its own-brand cola to rise, so it may need to order more stock **B1**

develops it, e.g. the rise could allow the supermarket to increase its own-brand price slightly, or the estimate should be treated with caution because other factors may change **B1**

Answer: Demand for the own-brand cola is expected to rise by 7% (1.4 x 5). The supermarket should plan for higher sales, for example by ordering more stock or by considering a small price rise, while remembering that the estimate assumes other factors stay unchanged.

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