2.9 National Income Determination and the Multiplier: Test Pack

Total Marks

AQA 7136 · Calculators not allowed · about 20 minutes

Name: _____ Date: ____ / ____ / _____

Answer all questions. Full sentences are required for questions worth 4 marks or more and for the 25-mark essay. No calculator is allowed. Show your working for every calculation.

1 Define the marginal propensity to consume (MPC) and state its role in the multiplier.

(Total for Question 1 is 1 mark)

2 Show that the marginal propensities MPC = 0.55, MPS = 0.15, MPT = 0.20 and MPM = 0.10 are consistent with each other in the circular flow of income (i.e. each extra pound of income is allocated).

(Total for Question 2 is 2 marks)

3 Calculate the marginal propensity to withdraw (MPW) given MPS = 0.05, MPT = 0.15 and MPM = 0.10, and state its unit (dimension).

(Total for Question 3 is 2 marks)

4 Calculate the multiplier when MPC = 0.70, MPS = 0.05, MPT = 0.15 and MPM = 0.10. Give your answer to 2 decimal places.

(Total for Question 4 is 3 marks)

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5 State and briefly explain one limitation of relying on a calculated multiplier when making fiscal policy decisions.

(Total for Question 5 is 3 marks)

6 Explain, in three steps, how an initial increase in investment becomes a multiplied increase in national income through the multiplier process.

(Total for Question 6 is 3 marks)

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Mark scheme · 2.9 National Income Determination and the Multiplier: Test Pack

Question 1

a numerical definition, e.g. the proportion of an extra pound of disposable income that households spend on consumption, stated as a fraction or decimal — **B1**

Answer: The MPC is the fraction of an extra pound of disposable income that households spend on consumption.

Question 2

adds the four marginal propensities: 0.55 + 0.15 + 0.20 + 0.10 — **M1**

equals 1.0, confirming the allocation of one pound of extra income — **A1**

Answer: 0.55 + 0.15 + 0.20 + 0.10 = 1.0.

Question 3

MPW = 0.05 + 0.15 + 0.10 — **M1**

MPW = 0.30, unit: fraction or decimal of one pound (no units) — **A1**

Answer: MPW = 0.30 (dimensionless fraction of each extra pound).

Question 4

MPW = MPS + MPT + MPM = 0.05 + 0.15 + 0.10 = 0.30 — **M1**

multiplier = 1 / MPW = 1 / 0.30 — **M1**

multiplier = 3.333... = 3.33 to 2 dp — **A1**

Answer: MPW = 0.30; multiplier = 1 / 0.30 = 3.33 (to 2 dp).

Question 5

identifies a limitation, e.g. uncertainty over the true value of the MPC or MPM, time lags, crowding out, or that some spending leaks abroad — **B1**

explains why this is a problem, e.g. an incorrect MPC leads to wrong multiplier size and hence wrong fiscal impulse estimate — **B1**

a brief example or development, e.g. if MPC is lower than assumed a planned spending increase will produce a smaller rise in income than forecast — **B1**

Answer: Limitation: the true MPC/MPM is uncertain so multiplier estimates may be wrong; if MPC is lower than assumed the fiscal stimulus will have a smaller effect than planned.

Question 6

first step: the initial investment injection becomes income for firms and workers — **B1**

second step: recipients spend a proportion of that income (MPC), creating further income for others — **B1**

third step: repeated rounds of respending occur but shrink each time because of withdrawals (saving, tax, imports), so the cumulative increase in income equals the initial injection times the multiplier — **B1**

Answer: Initial injection becomes income, a proportion is respent (MPC) creating further rounds, which shrink due to withdrawals so total income rises by injection x multiplier.

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