

Exercise walk-through

Malthusian Theory ■ 2.6

eXercise

You must be able to

- state Malthus's argument about population and food
- explain the difference between geometric and arithmetic growth in his theory
- summarise how **neo-Malthusians** 新马尔萨斯主义者 update the idea
- give one criticism of Malthus

Method — Malthus's argument

Thomas Malthus argued **population grows geometrically** (1, 2, 4, 8...) while **food grows arithmetically** (1, 2, 3, 4...), so population would outrun food and cause famine.

Method — Neo-Malthusians

Neo-Malthusians extend the worry to all resources (water, energy, land) and a larger global population, warning of shortages and environmental limits.

Method — Criticisms

Critics note Malthus underestimated **technology** — the Green Revolution raised food output hugely — and ignored that development lowers fertility.

Practice 2.1 ■ 2 marks

State Malthus's central claim about population and food supply.

Solution 2.1

Method: Malthus's argument

Worked steps

population grows faster (geometrically) than food (arithmetically) **B1**; so population outstrips food, causing famine **B1**.

Practice 2.2 ■ 2 marks

State one reason Malthus's prediction has not come true for the world as a whole.

Solution 2.2

Worked steps

technology/the Green Revolution raised food output far beyond his estimate **B1**;
fertility also fell as countries developed **B1**.

Practice 2.3 ■ 1 mark

A modern writer warns that a growing population will exhaust fresh water and energy.

- (a) Which updated theory is this?
- (b) State how it differs from Malthus's original focus.

Solution 2.3

Method: Neo-Malthusians

Worked steps

(a) neo-Malthusian **B1**. (b) it extends the concern from food to all resources/the environment **B1**.

Exam-style 3.1 ■ 1 mark

Malthus argued that food supply increases

A geometrically

B arithmetically

C exponentially

D not at all

Solution 3.1

Method: Malthus's argument

A geometrically

B arithmetically 

C exponentially

D not at all

Worked steps

B. food grows arithmetically (1,2,3,4) in his theory.

Exam-style 3.2 ■ 1 mark

The strongest evidence against Malthus is the

- A** population pyramid
- B** Green Revolution's rise in food output
- C** sex ratio
- D** distance decay effect

Solution 3.2

- A population pyramid
- B Green Revolution's rise in food output** 
- C sex ratio
- D distance decay effect

Worked steps

- B. technology (Green Revolution) massively raised food supply.

Exam-style 3.3 ■ 1 mark

Two students debate Malthus.

- (a) State one factor Malthus underestimated.
- (b) Explain why some still find neo-Malthusian ideas relevant.

Solution 3.3

Method: Criticisms

Worked steps

(a) technological progress in agriculture **B1**. (b) some resources (water, fossil fuels, arable land) really are finite and under pressure **B1**.