

Exercise walk-through

The Demographic Transition Model ■ 2.5

eXercise

You must be able to

- describe the birth and death rates in each of the DTM's five stages
- explain why the death rate falls before the birth rate
- place a country in a DTM stage from its rates
- state one limitation of the DTM

Method — The five stages

Stage 1: high CBR and CDR (stable). Stage 2: CDR falls, CBR high (fast growth).
Stage 3: CBR falls (slowing growth). Stage 4: both low (stable). Stage 5: CBR below CDR (decline).

Method — Why death falls first

Better food, water, sanitation, and medicine cut the **death rate** early. The **birth rate** stays high longer because family size is cultural and slow to change — so Stage 2 grows fast.

Method — Limitations

The DTM is based on Europe's history, assumes all countries follow the same path, and ignores migration and government policy.

Practice 2.1 ■ 2 marks

Describe the birth and death rates in Stage 2 of the DTM.

Solution 2.1

Method: Why death falls first

Worked steps

death rate falling **B1**; birth rate still high → rapid natural increase **B1**.

Practice 2.2 ■ 2 marks

Explain why the death rate falls before the birth rate.

Solution 2.2

Method: Why death falls first

Worked steps

improved food, sanitation, and medicine quickly cut deaths **B1**; high fertility persists as cultural attitudes to family size change slowly **B1**.

Practice 2.3 ■ 1 mark

Country Z has a low death rate and a birth rate that has recently begun to fall.

- (a) Which DTM stage is it in?
- (b) State what is happening to its growth rate.

Solution 2.3

Method: Why death falls first

Worked steps

(a) Stage 3 **B1**. (b) growth is slowing (still positive but decelerating) **B1**.

Exam-style 3.1 ■ 1 mark

In Stage 4 of the DTM, birth and death rates are both

A high

B low

C rising

D unequal by 20 per 1000

Solution 3.1

Method: Why death falls first

A high

B low



C rising

D unequal by 20 per 1000

Worked steps

B. Stage 4 has low birth and low death rates, near-stable population.

Exam-style 3.2 ■ 1 mark

One valid criticism of the DTM is that it

- A** shows death rates
- B** is based on European history and ignores migration
- C** has five stages
- D** uses birth and death rates

Solution 3.2

- A shows death rates
- B is based on European history and ignores migration** 
- C has five stages
- D uses birth and death rates

Worked steps

- B. the model generalises from Europe and omits migration/policy.**

Exam-style 3.3 ■ 1 mark

A country has very high birth and death rates that roughly balance.

(a) Which DTM stage is this?

(b) Explain why almost no countries are in this stage today.

Solution 3.3

Method: Why death falls first

Worked steps

(a) Stage 1 **B1**. (b) modern medicine/sanitation have cut death rates almost everywhere, moving countries to Stage 2+ **B1**.