Exercise walk-through

1.2
Population challenges, policies and migration

International Baccalaureate · IB Diploma · Geography · HL

How populations change

- The **demographic transition model** (DTM) shows how birth and death rates change as a country develops:
- *Demographic transition: death rates fall before birth rates, and the gap is population growth*
- The model is based on European history.
- It does not include migration, and it does not say how long each stage lasts: China passed through stages 2 to 4 in about 50 years, much faster than Britain.

$$\text{dependency ratio} = \frac{\text{aged 0–14} + \text{aged 65 and over}}{\text{aged 15–64}} \times 100$$

Challenges and policies

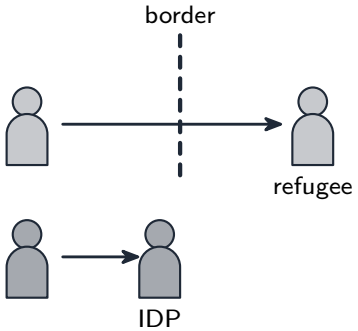
- **Ageing populations** have more older people: Japan had about 29% of its people aged 65 and over in 2023.
- Problems: fewer workers, more spending on pensions and health care.
- Opportunities: older people care for grandchildren and volunteer, and "silver" industries grow. **Youthful populations** need schools and jobs; without jobs, young people may migrate or become frustrated.
- Governments respond with policies:

Common errors

- Confusing the birth rate (births per 1,000 people) with the fertility rate (children per woman).
- Forgetting migration: total population change is **natural increase** plus **net migration**.
- Treating the **demographic transition model** as a forecast; it describes the past of today's rich countries and may not fit every country.

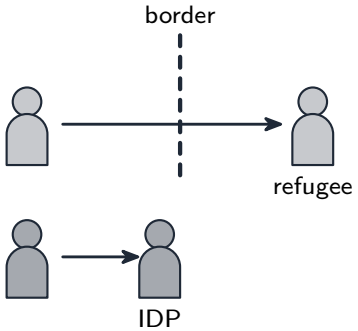
Exercise 2.1

2.1 Distinguish between a **refugee** and an **internally displaced person** (IDP). [2]



Exercise 2.1

2.1 Distinguish between a **refugee** and an **internally displaced person** (IDP). [2]

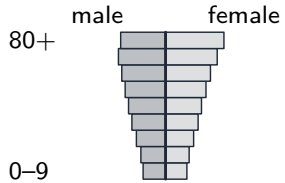


2.1

a refugee has crossed an international border to escape war or persecution; an IDP has also been forced to flee but is still inside their own country

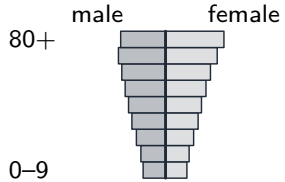
Exercise 2.2

2.2 In 2023 about 29 % of Japan's people were aged 65 and over. Outline **two** problems and **one** opportunity of this ageing population. [3]



Exercise 2.2

2.2 In 2023 about 29 % of Japan's people were aged 65 and over. Outline **two** problems and **one** opportunity of this ageing population. [3]

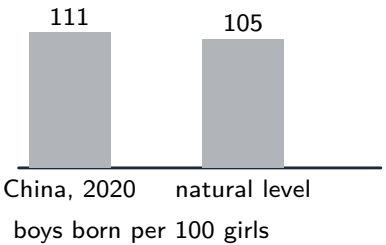


2.2

problems, any two: fewer people of working age / labour shortages; higher spending on pensions and health care, paid by fewer taxpayers; empty villages and closed schools in rural areas; opportunity: older people give childcare or volunteer / a "silver" market for health, leisure and care services

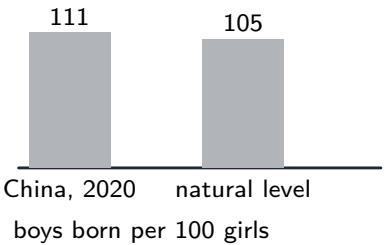
Exercise 2.3

2.3 In 2020, about 111 boys were born in China for every 100 girls. The natural level is about 105. For every 1,000 girls born, calculate how many more boys were born than the natural level would give. [2]



Exercise 2.3

2.3 In 2020, about 111 boys were born in China for every 100 girls. The natural level is about 105. For every 1,000 girls born, calculate how many more boys were born than the natural level would give. [2]

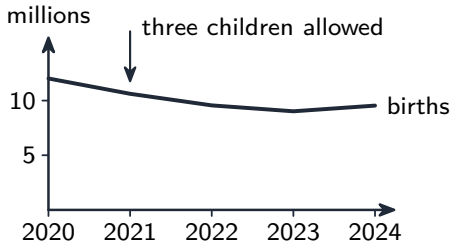


2.3

$1{,}000 \times \frac{111}{100} = 1{,}110$ boys, against $1{,}000 \times \frac{105}{100} = 1{,}050$; **60** more boys

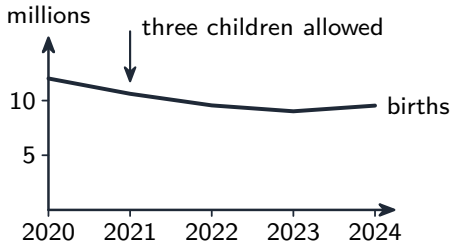
Exercise 2.4

2.4 China has allowed three children since 2021, but its births kept falling. Explain **three** reasons why the pro-natalist policy has had little effect so far. [3]



Exercise 2.4

2.4 China has allowed three children since 2021, but its births kept falling. Explain **three** reasons why the pro-natalist policy has had little effect so far. [3]

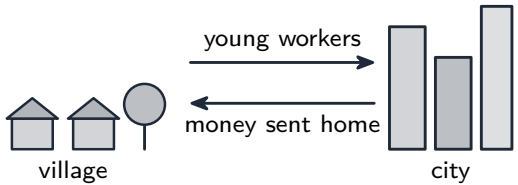


2.4

any three: high costs of housing, education and childcare; people marry and have children later, or not at all; more women are educated and work, so the cost of leaving work is high; small families have become the normal choice after decades of the one-child policy; policies on births work slowly, so the effect may come later

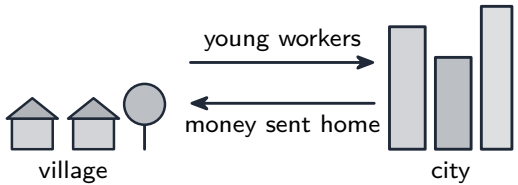
Exercise 2.5

2.5 Explain **two** effects of rural–urban migration on the villages that migrants leave in China. [4]



Exercise 2.5

2.5 Explain **two** effects of rural–urban migration on the villages that migrants leave in China. [4]



2.5

any two, each explained: remittances pay for houses, school fees and farm inputs in the village; loss of young workers, so farmland is left unused or farmed by older people; “left-behind” children grow up with grandparents, which can affect their schooling and well-being; the village population ages, so schools close and care needs grow

Exercise 3.1 (a)

3.1 *(Paper 2 style.)* The graph shows the approximate total fertility rate (TFR) in China.

(a) Describe the change in China's TFR from 1970 to 2023. Use data from the graph. [2]

Exercise 3.1 (a)

3.1 *(Paper 2 style.)* The graph shows the approximate total fertility rate (TFR) in China.

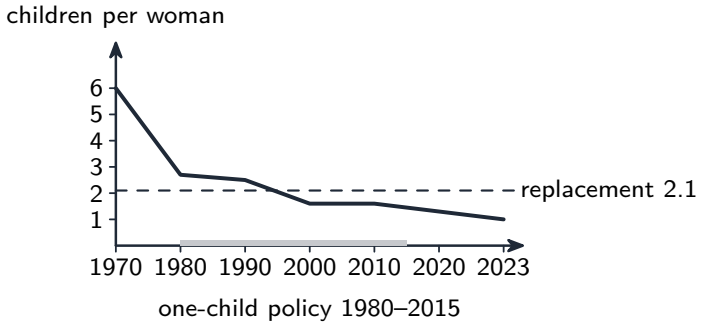
(a) Describe the change in China's TFR from 1970 to 2023. Use data from the graph. [2]

(a) a large fall from about 6 in 1970 to about 1.0 in 2023; fastest in the 1970s, then slower; below the replacement level (2.1) since about 1990

Exercise 3.1 (b)

3.1 *(Paper 2 style.)* The graph shows the approximate total fertility rate (TFR) in China.

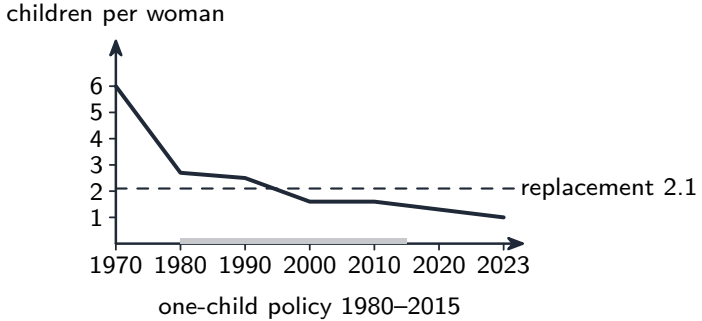
(b) Explain why China's TFR fell during the 1970s, before the one-child policy began. [4]



Exercise 3.1 (b)

3.1 *(Paper 2 style.)* The graph shows the approximate total fertility rate (TFR) in China.

(b) Explain why China's TFR fell during the 1970s, before the one-child policy began. [4]



(b) the "later, longer, fewer" campaign of the 1970s encouraged later marriage, longer gaps between births and fewer children; better health care meant more children survived, so families needed fewer births; more education and work for women, and contraception became available

Exercise 3.2

3.2 Evaluate the effectiveness of government policies that aim to change the birth rate. [10]

Exercise 3.2

3.2 Evaluate the effectiveness of government policies that aim to change the birth rate. [10]

3.2

Mark with the markbands: [9-10] focused on the command term, detailed and accurate knowledge, well-developed explanation, specific named examples (places, dates, numbers), balanced evaluation and a supported conclusion; [7-8] mostly focused, good knowledge and examples, some evaluation; [5-6] relevant knowledge and examples, explanation partly developed, little evaluation; [3-4] general knowledge, few examples, mostly description; [1-2] little that is relevant. Points that may be included: anti-natalist: China's one-child policy (1980–2015) prevented many births and slowed growth; but the TFR had already fallen to under 3 before 1980, so other factors (health, education, the 1970s campaign) did much of the work; side effects: a sex ratio of about 111 boys per 100 girls and faster ageing; pro-natalist: China's two-child (2016) and three-child (2021) policies: births still fell, to 9.54 million in 2024; costs of housing, education and childcare matter more than permission; France: family payments, tax benefits and cheap childcare; its fertility has been among the highest in the EU, though still below 2.1; pro-natalist policies seem to work best when they lower the real cost of children over many years; anti-natalist policies are easier to enforce than pro-natalist ones, because a government can limit births but cannot make people want more children; conclusion: policies can speed up or slow down change, but economic and social change explains most of it