

Exercise walk-through

Challenges of Urban Sustainability ■ 6.11

eXercise

You must be able to

- explain how sprawl harms sustainability
- explain sanitation and housing-affordability challenges
- link cities to **climate change** 气候变化
- state one sustainable solution

Method — Sprawl and services

Sprawl raises car use, emissions, and the cost of extending water, power, and transit, while covering farmland and habitat.

Method — Sanitation and housing

Fast-growing cities can struggle to supply clean water and **sanitation**, and rising demand makes **housing** unaffordable, forcing informal settlements.

Method — Climate and solutions

Cities produce most greenhouse-gas emissions. Solutions include public transit, green building, denser smart growth, and affordable housing.

Practice 2.1 ■ 2 marks

Explain how urban sprawl harms sustainability.

Solution 2.1

Worked steps

it increases driving/emissions and the cost of services **B1**; it consumes farmland and habitat **B1**.

Practice 2.2 ■ 2 marks

State two challenges a fast-growing city faces in providing for residents.

Solution 2.2

Method: Sanitation and housing

Worked steps

any two of: clean water/sanitation, affordable housing, transit, waste, power
B1 **B1**.

Practice 2.3 ■ 1 mark

A booming city has spreading informal settlements without proper sanitation.

- (a) State one health risk this creates.
- (b) State one sustainable response.

Solution 2.3

Method: Sanitation and housing

Worked steps

(a) spread of disease from poor water/sanitation **B1**. (b) invest in water/sanitation, affordable formal housing, upgrading **B1**.

Exam-style 3.1 ■ 1 mark

A major sustainability problem caused by urban sprawl is

- A** less driving
- B** higher car use and emissions
- C** cheaper services
- D** protected farmland

Solution 3.1

- A less driving
- B higher car use and emissions**
- C cheaper services
- D protected farmland



Worked steps

- B. sprawl increases driving and emissions.

Exam-style 3.2 ■ 1 mark

A sustainable response to unaffordable city housing is to

- A** ban all building
- B** build affordable, denser housing near transit
- C** expand low-density sprawl
- D** remove sanitation

Solution 3.2

Method: Sanitation and housing

- A ban all building
- B build affordable, denser housing near transit 
- C expand low-density sprawl
- D remove sanitation

Worked steps

B. affordable dense housing near transit is a sustainable fix.

Exam-style 3.3 ■ 1 mark

Cities produce most of the world's greenhouse-gas emissions.

- (a) State one reason cities emit so much.
- (b) State one policy to cut a city's emissions.

Solution 3.3

Method: Climate and solutions

Worked steps

(a) concentrated transport, energy use, industry, and buildings **B1**. (b) public transit, green buildings, renewable energy, smart growth **B1**.