

Question 23 (10 marks) Use the Question 23 writing booklet.

The Carbon Footprint Calculator is an online calculator that can estimate the size of your carbon footprint. When you enter details about home, travel and lifestyle habits the calculator produces a graph displaying the impact of your current emissions against the average Australian household emissions and identifies ways for you to cut emissions.

The calculator is displayed below.



Carbon Footprint Calculator

1. What state do you live in?

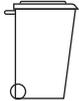
2. What sort of home do you live in?
 House Unit

3. How many people? (click to select)


4. How much electricity do you use?
My electricity consumption is
 kWh

5. How much natural gas do you use?
My natural gas consumption is
 MJ

6. Which energy saving measures have you installed in your home?
 Roof insulation Double glazing
 Energy efficient lighting
 Energy efficient appliances

7. How much garbage do you put out for collection? (click to select)
  
Wheelie bin Smaller bin Household bin

8. Which energy saving habits have you adopted?
 I hang my clothes on the line rather than using the tumble dryer.
 I have drapes or blinds on larger windows to reduce heat transfer.
 I switch off lights when I leave the room.
 I switch off electrical equipment at the wall when not in use.

9. What type of public transport does your household use?
Mode
Kms travelled
Time period

10. Which travel-smart behaviours has your household adopted?
 Car sharing
 Cycling or walking to school/work

Question 23 continues on page 13

Question 23 (continued)

- (a) Identify a technique that has been implemented to reduce data entry errors and explain why it is appropriate. **2**
- (b) Explain why the developers of the Carbon Footprint Calculator have used the screen elements in Questions 3 and 7 rather than other data collection methods. **2**
- (c) On completion of the data entry, the Carbon Footprint Calculator provides the user with a graph of the results, titled 'My Footprint'. The results (calculated in tonnes of CO₂) include: **3**
- Household total
 - Transport total
 - Australian 'My Footprint' average.

Design a screen to display the results of the Carbon Footprint Calculator.

- (d) Describe the analysing processes needed by the Carbon Footprint Calculator in order to generate information. **3**

End of Question 23