



GCSE

3310U20 –1

WEDNESDAY, 4 JUNE 2025 – MORNING

MATHEMATICS – NUMERACY

UNIT 2: CALCULATOR – ALLOWED

FOUNDATION TIER

**1 hour 30 minutes plus your additional
time allowance**

**A CALCULATOR WILL BE REQUIRED
FOR THIS PAPER.**

Surname: _____

First name(s): _____

Centre Number: _____

Candidate Number: 0 _____

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.	3	
2.	6	
3.	13	
4.	11	
5.	1	
6.	5	
7.	8	
8.	2	
9.	4	
10.	4	
11.	8	
Total	65	

ADDITIONAL MATERIALS

A ruler, protractor and pair of compasses may be required.

ITEMS INCLUDED WITH QUESTION PAPER

A separate Formula List.

A separate Diagram Booklet.

Model for Question 10 (b).

The Diagram Booklet MUST be handed in to the invigilators and sent for marking.

(Turn over)

INSTRUCTIONS TO CANDIDATES

Use black ink, black ball–point pen, black felt tip or your usual method.

Write your name, centre number and candidate number in the spaces on the front cover.

Answer ALL questions in the spaces provided.

If you run out of space, use the additional page(s) at the back of this booklet.

Question numbers must be given for the work written on the additional page(s).

Take π as $3 \cdot 14$ or use the π button on your calculator.

(Turn over)

INFORMATION FOR CANDIDATES

You should give details of your method of solution when appropriate.

Unless stated, diagrams are not drawn to scale.

Scale drawing solutions will not be acceptable where you are asked to calculate.

The number of marks is given in brackets at the end of each question or part – question.

In question 4 (a), the assessment will take into account the quality of your linguistic and mathematical organisation, communication and accuracy in writing.

(Turn over)

- 1. Emma and Nathan play a game on a coordinate grid.**
Emma uses crosses and Nathan uses circles.
Emma goes first.
To win the game, a player must get 4 crosses or 4 circles together in a line.
The line can be horizontal, vertical or diagonal.
Look at the diagram for Question 1 in the separate Diagram Booklet.
The diagram is a grid. The grid shows the positions of their crosses and circles after 5 turns each.

continued on the next page . . .

(Turn over)

Question 1 continued

- 1. (a) It is Emma's turn to put a cross on the coordinate grid.**

Write down the coordinates of the 3 points where Emma could put a cross to win the game.

**(____ , ____) and (____ , ____)
and (____ , ____)**

[2 marks]

continued on the next page . . .

(Turn over)

Question 1 continued

1. (b) Unfortunately, Emma did not win the game on her next turn.

What is the chance of Nathan winning on his next turn?

Circle your answer.

impossible
unlikely
even chance
likely
certain

[1 mark]

(Turn over)

2. Alyson opens a new bank account.

(a) She receives a debit card.

To use her debit card, Alyson creates a 4 – digit code.

Alyson uses all the following information to choose her 4 digits.

- **All the digits are different.**
- **There are no even numbers.**
- **Two of the digits are multiples of 3**
- **Two of the digits are factors of 10**
- **All numbers are written in DESCENDING order.**

continued on the next page . . .

(Turn over)

Question 2 (a) continued

Write down Alyson's 4 – digit code in the boxes on the next page.

(Turn over)

Alyson's 4 – digit code:

--	--	--	--

[3 marks]

continued on the next page . . .

(Turn over)

Question 2 continued

- 2. (b) Alyson uses her new bank card to buy birthday presents for her son, Jamie.**

She buys the following presents:

- a pair of football boots for £112.50**
- a football shirt of his favourite team for £84.90**

She uses a £30 gift voucher as part of the payment for the presents.

Then, the sports shop gives Alyson a discount of 10% off the remaining amount.

continued on the next page . . .

(Turn over)

Question 2 (b) continued

What is the value of the 10% discount that Alyson gets?

(Turn over)

**Value of the 10% discount that Alyson
gets = £ _____**

[3 marks]

(Turn over)

3. Look at the diagram for Question 3 in the separate Diagram Booklet.

The diagram is a pictogram.

The pictogram shows information about the number of houses that are for sale on a new housing estate.

(a) (i) How many 4 – bedroom houses are there for sale on the new housing estate?

[1 mark]

continued on the next page . . .

(Turn over)

Question 3 (a) continued

- 3. (a) (ii) Calculate the total number of
BEDROOMS in all the
3 – bedroom houses for sale
on the estate.**

[2 marks]

continued on the next page . . .

(Turn over)

Question 3 continued

- 3. (b) Look at the table for Question 3 (b) in the separate Diagram Booklet. The table gives the selling price of each type of house.**
- (i) All the houses were sold at the selling prices shown in the table.**
- Calculate the total amount of money paid for all the houses on the housing estate.**

(Turn over)

[3 marks]

continued on the next page . . .

(Turn over)

Question 3 (b) continued

**3. (b) (ii) What is the range of the
selling prices of these
houses?**

[1 mark]

continued on the next page . . .

(Turn over)

Question 3 continued

3. (c) Look at the diagram for Question 3 (c) in the separate Diagram Booklet. The diagram is NOT drawn to scale. The diagram shows the ground – floor plan of a 3 – bedroom house.

**(i) What is the total area of the ground floor of the 3 – bedroom house?
Give your answer in square feet.**

(Turn over)

continued on the next page . . .

(Turn over)

Question 3 (c) continued

- 3. (c) (ii) On the grid provided for Question 3 (c) (ii) in the separate Diagram Booklet, make an accurate scale drawing of the ground – floor plan of the 3 – bedroom house. Use a scale of 1 SQUARE TO REPRESENT 2 FEET.**

[3 marks]

(Turn over)

- 4. Mr and Mrs Smith and their three children visit London to go on the London Eye.**

(a) IN THIS PART OF THE QUESTION, YOU WILL BE ASSESSED ON THE QUALITY OF YOUR ORGANISATION, COMMUNICATION AND ACCURACY IN WRITING.

The Smith family travel by train to London.

The three children's train tickets cost £41.80 EACH.

continued on the next page . . .

(Turn over)

Question 4 (a) continued

The following table shows the entry costs for the London Eye.

	Cost per Adult	Cost per Child
London Eye	£36	£32.50

The total cost of the train tickets and entry to the London Eye for the family is £466

Find the cost of ONE adult train ticket.

You must show all your working.

(Turn over)

[illegible]

(Turn over)

[6 marks + 2 marks OCW]

continued on the next page . . .

(Turn over)

Question 4 continued

- 4. (b) Look at the diagram for Question 4 (b) in the separate Diagram Booklet. The diagram represents a SCALE DRAWING of the London Eye.**

The scale of the drawing is 1 cm REPRESENTS 15 metres.

**Find the actual height of the top of the London Eye from the ground.
Give your answer in metres.**

(Turn over)

Height of the London Eye

= _____ metres

[3 marks]

(Turn over)

- 5. Look at the diagram for Question 5 in the separate Diagram Booklet.**

The diagram is a map.

A helicopter flies from Barmouth to Cardiff, as shown on the map.

What is the bearing of Cardiff from Barmouth?

_____ °

[1 mark]

(Turn over)

6. Look at the information for Question 6 in the separate Diagram Booklet.

The information is a recipe.

Emir uses this recipe to make chocolate mousse.

(a) Emir is making chocolate mousse to serve 18 people.

Complete the following list of the quantities of ingredients that he needs.

_____ g dark chocolate

_____ g cocoa powder

_____ g yoghurt

_____ g sugar

[3 marks]

continued on the next page . . .

(Turn over)

6. (b) Express the following ratios in their simplest terms.

yoghurt : sugar = _____ : _____

dark chocolate : cocoa powder

= _____ : _____

[2 marks]

(Turn over)

7. Look at the information for Question 7 in the separate Diagram Booklet.

The information is about camping at Maes Hyfryd.

4 friends are planning a camping holiday for 5 nights at Maes Hyfryd.

The 4 friends cannot decide whether to:

- take two tents, so that 2 people sleep in each tent**
or
- take one tent that all 4 friends can share.**

continued on the next page . . .

(Turn over)

Question 7 continued**Calculate:**

- **the total charge for staying for 5 nights if the 4 friends use two tents and**
- **the saving made if the friends decide to use just one tent.**

You must show all your working.

(Turn over)

[illegible]

(Turn over)

[illegible]

(Turn over)

[illegible]

(Turn over)

[illegible]

(Turn over)

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

(Turn over)

[8 marks]

(Turn over)

8. The information below is shown on a bottle of sun cream:

One application of sun cream is 1 ounce.

Use 2 milligrams of sun cream to cover an area of 1 cm^2 of skin.

Use: 1 ounce $\approx$ 28 350 milligrams

Use this information to calculate the area of skin covered by one application of sun cream.

Give your answer in cm^2

(Turn over)

[2 marks]

(Turn over)

9. Look at the diagram for Question 9 in the separate Diagram Booklet.

The diagram is NOT drawn to scale.

The diagram represents a plan of new roads that are being built in a town.

The plan shows the roads and the size of some of the angles between them.

Calculate the size of each of the angles v , w , x and y .

$$v = \underline{\hspace{2cm}}^\circ$$

$$w = \underline{\hspace{2cm}}^\circ$$

$$x = \underline{\hspace{2cm}}^\circ$$

$$y = \underline{\hspace{2cm}}^\circ$$

[4 marks]

(Turn over)

10. Nina sells flowers.

- (a) At the start of last week, Nina spent £600 buying flowers to sell.**

By the end of the week, she had taken £1140 from the sale of the flowers.

Calculate Nina's percentage profit from the sale of these flowers.

(Turn over)

[2 marks]

continued on the next page . . .

(Turn over)

Question 10 continued

10. (b) Ask for the model for Question 10 (b).

The model is NOT made to scale.

The model represents a vase.

Nina wants to display her flowers.

She buys a glass vase from a website.

The vase is in the shape of a cuboid.

It can hold 1648 cm^3 of water when it is full.

The vase has a base measuring 10 cm by 8 cm.

continued on the next page . . .

(Turn over)

Question 10 (b) continued

Calculate the height of this vase.

[2 marks]

(Turn over)

11. Look at the diagram for Question 11 in the separate Diagram Booklet.

The diagram is a scatter diagram.

In a PE lesson, 12 students each measured their height and arm span. The results are shown on the scatter diagram.

continued on the next page . . .

(Turn over)

Question 11 continued

11. (a) Anwen is the only student who made an error in her measurements.

She is one of the shortest students.

**What did Anwen record as the measurement for her arm span?
Circle your answer.**

155 cm
168 cm
173 cm
172•5 cm
178 cm

[1 mark]

continued on the next page . . .

(Turn over)

Question 11 continued

11. (b) If you ignore Anwen's height, what is the median height of the other 11 students?

Median height is _____ cm

[1 mark]

continued on the next page . . .

(Turn over)

Question 11 continued

11. (c) What term best describes the correlation between a student's height and their arm span?

[1 mark]

continued on the next page . . .

(Turn over)

Question 11 continued

**11. (d) Megan has the same arm span
as Elwyn.**

Elwyn is taller than Megan.

How tall is Megan?

Megan is _____ cm tall

[2 marks]

continued on the next page . . .

(Turn over)

Question 11 continued

11. (e) Roland is 160 cm tall.

Elsa is 10% taller than Roland.

Find Elsa's height and arm span.

Elsa's height is _____ cm

Elsa's arm span is _____ cm

[3 marks]

END OF PAPER

TOTAL 65 MARKS

(Turn over)

[illegible]

(Turn over)

[illegible]

(Turn over)

[illegible]



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FOUNDATION TIER

Diagram Booklet

**The Diagram Booklet MUST be handed in
to the invigilators and sent for marking.**

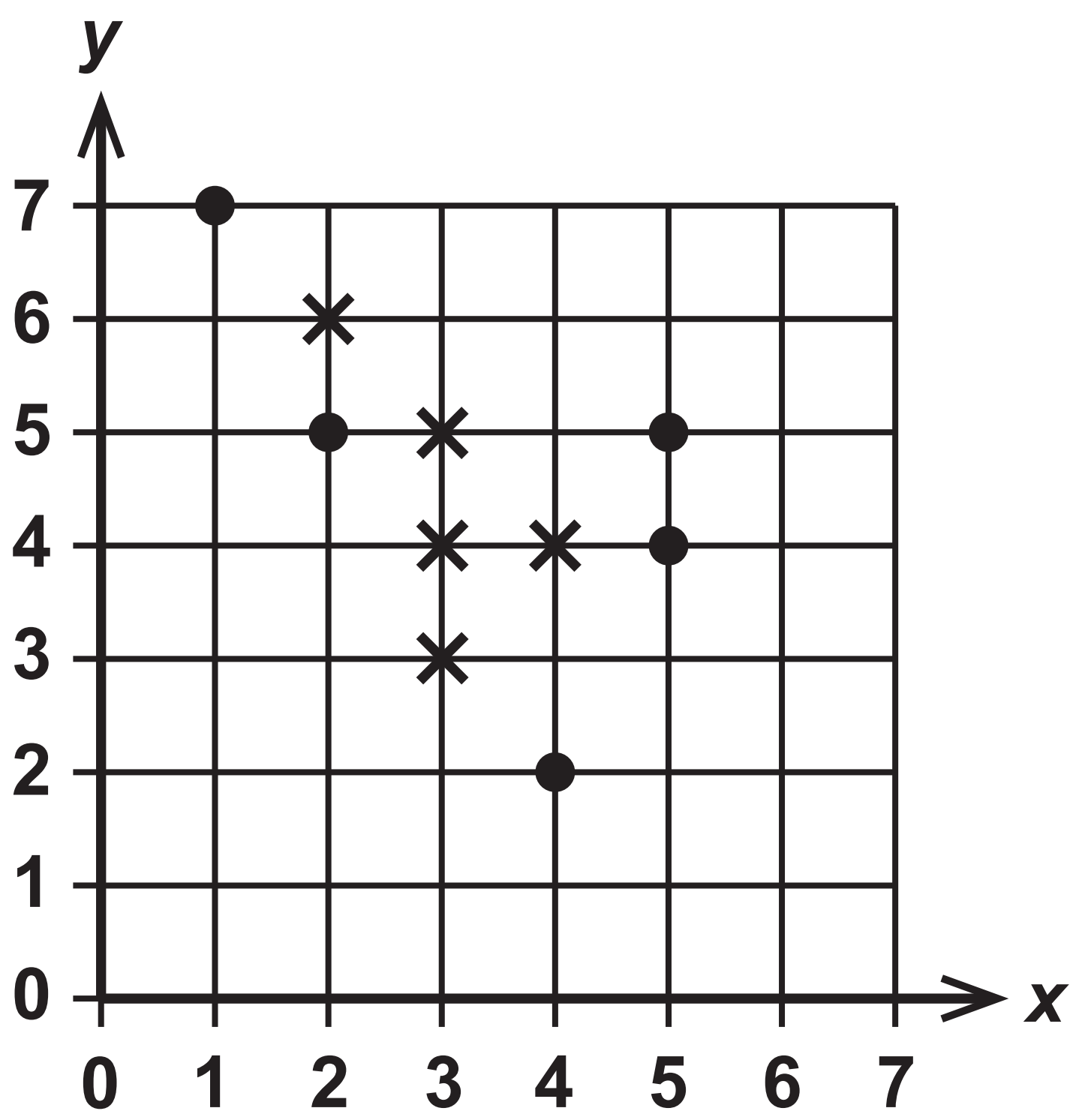
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First name(s): _____

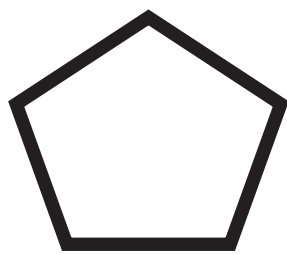
Centre Number: _____

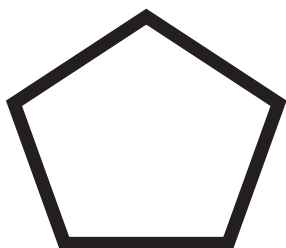
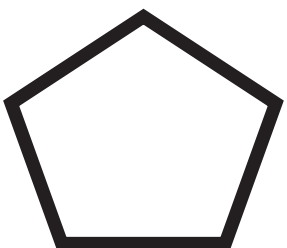
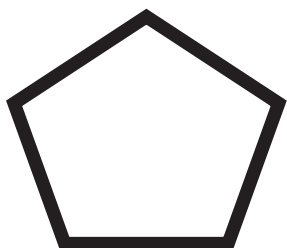
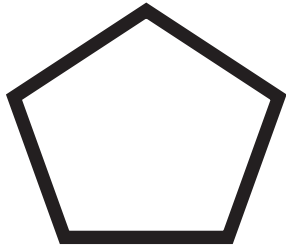
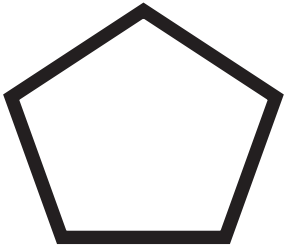
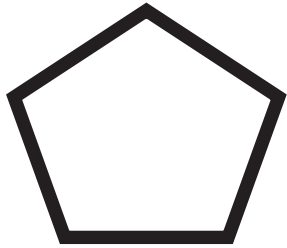
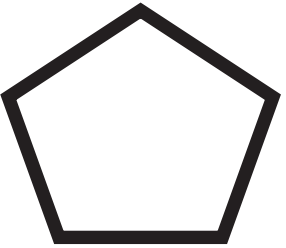
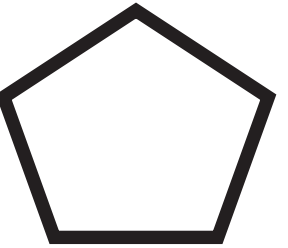
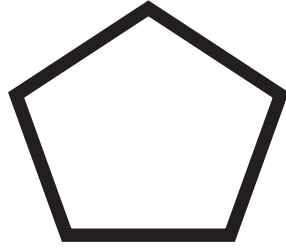
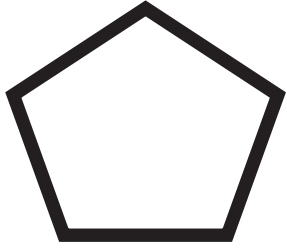
Candidate Number: 0 _____

Question 1



Question 3

Key:  represents 2 HOUSES

2 – bedroom house	   
3 – bedroom house	     
4 – bedroom house	  

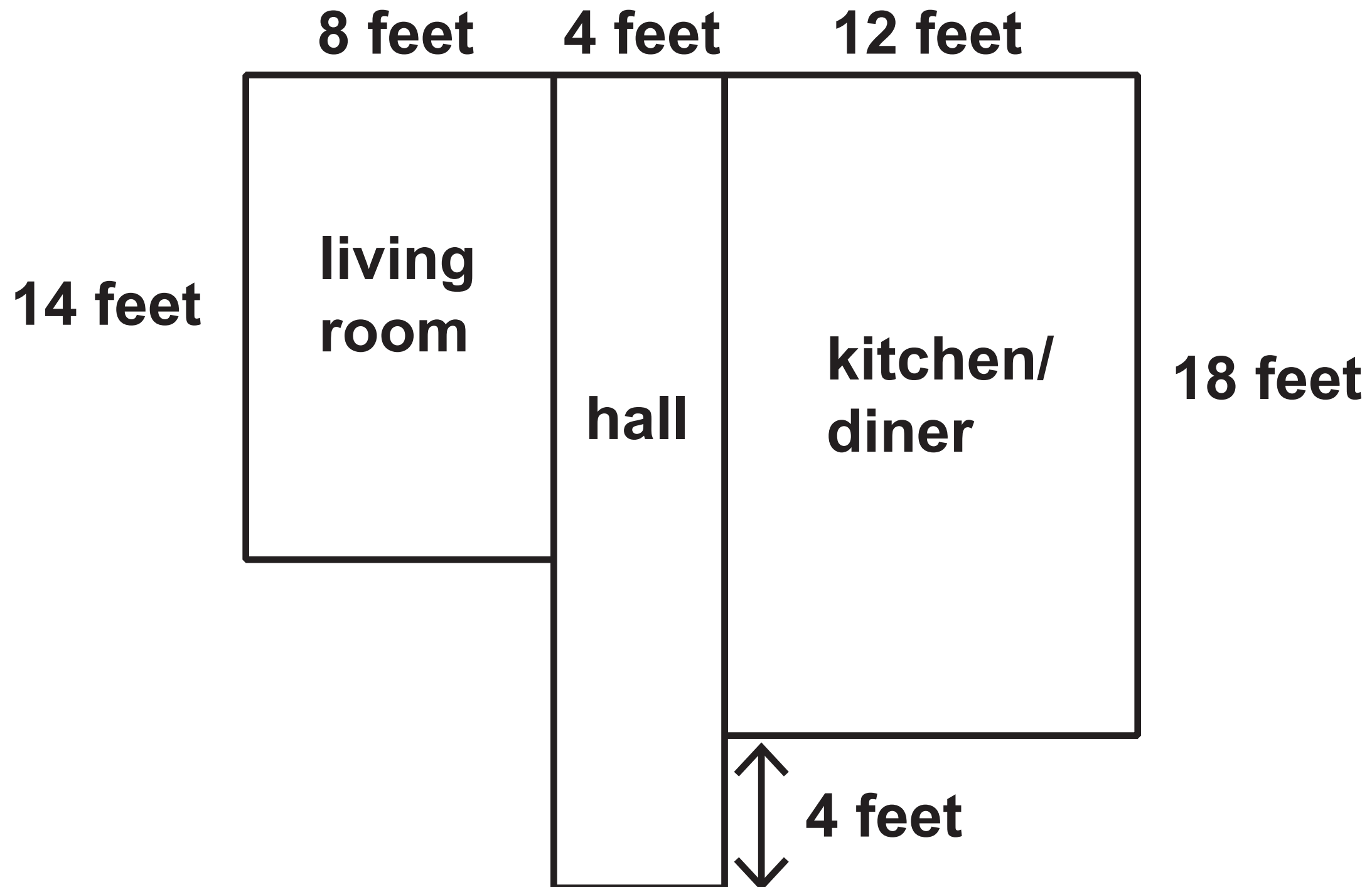
Question 3 (b)

Table

Type of house	Selling price
2 – bedroom house	£145 000
3 – bedroom house	£179 000
4 – bedroom house	£226 000

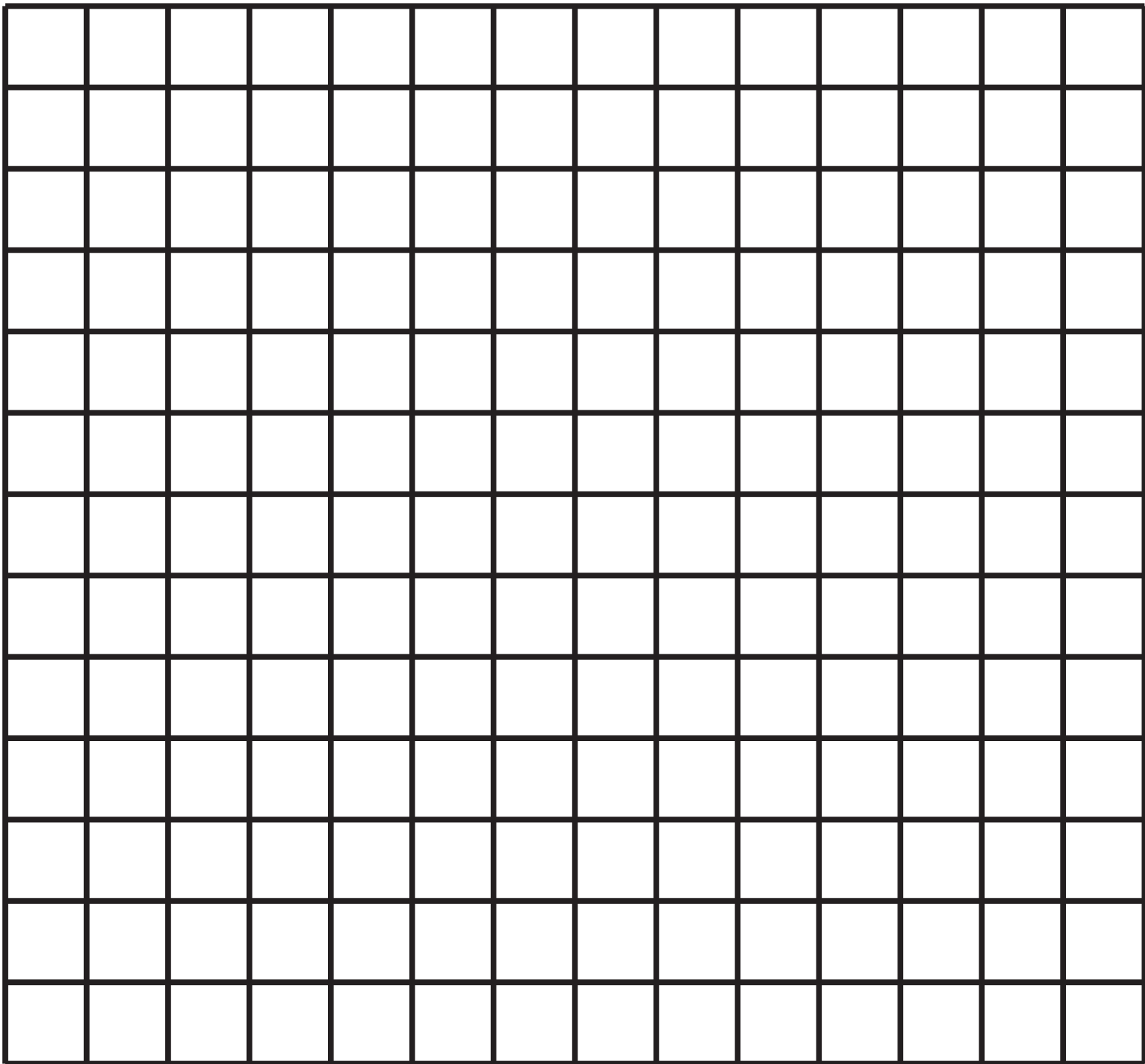
Question 3 (c)

Diagram NOT drawn to scale



Question 3 (c) (ii)

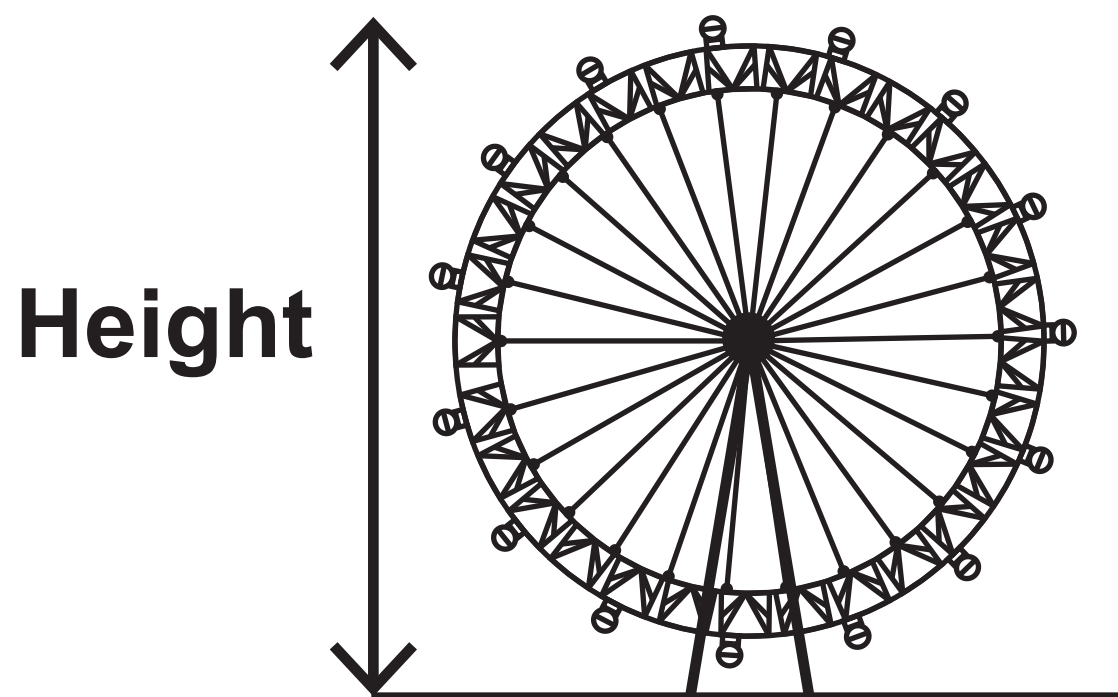
Scale: 1 square to represent 2 feet



Question 4 (b)

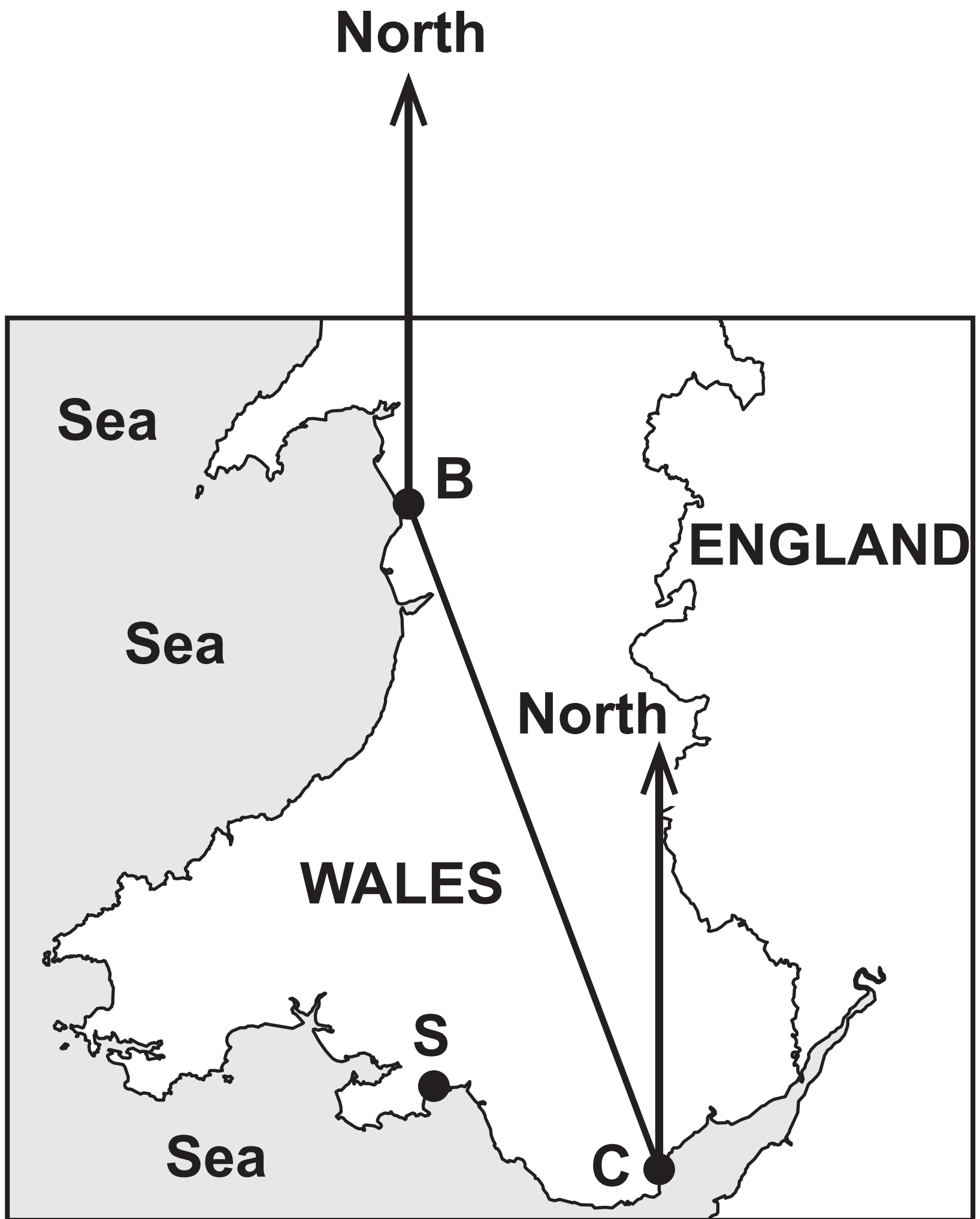
SCALE DRAWING of the London Eye

Scale: 1 cm represents 15 metres



Question 5

Key: B = Barmouth C = Cardiff
S = Swansea



Question 6

Recipe for Chocolate Mousse

Serves 4 people

84 g dark chocolate

16 g cocoa powder

50 g yoghurt

10 g sugar

Question 7

Information

MAES HYFRYD

Camping charges per night:

£24.50 per tent per night

AND

a fee of £6 per person staying per night

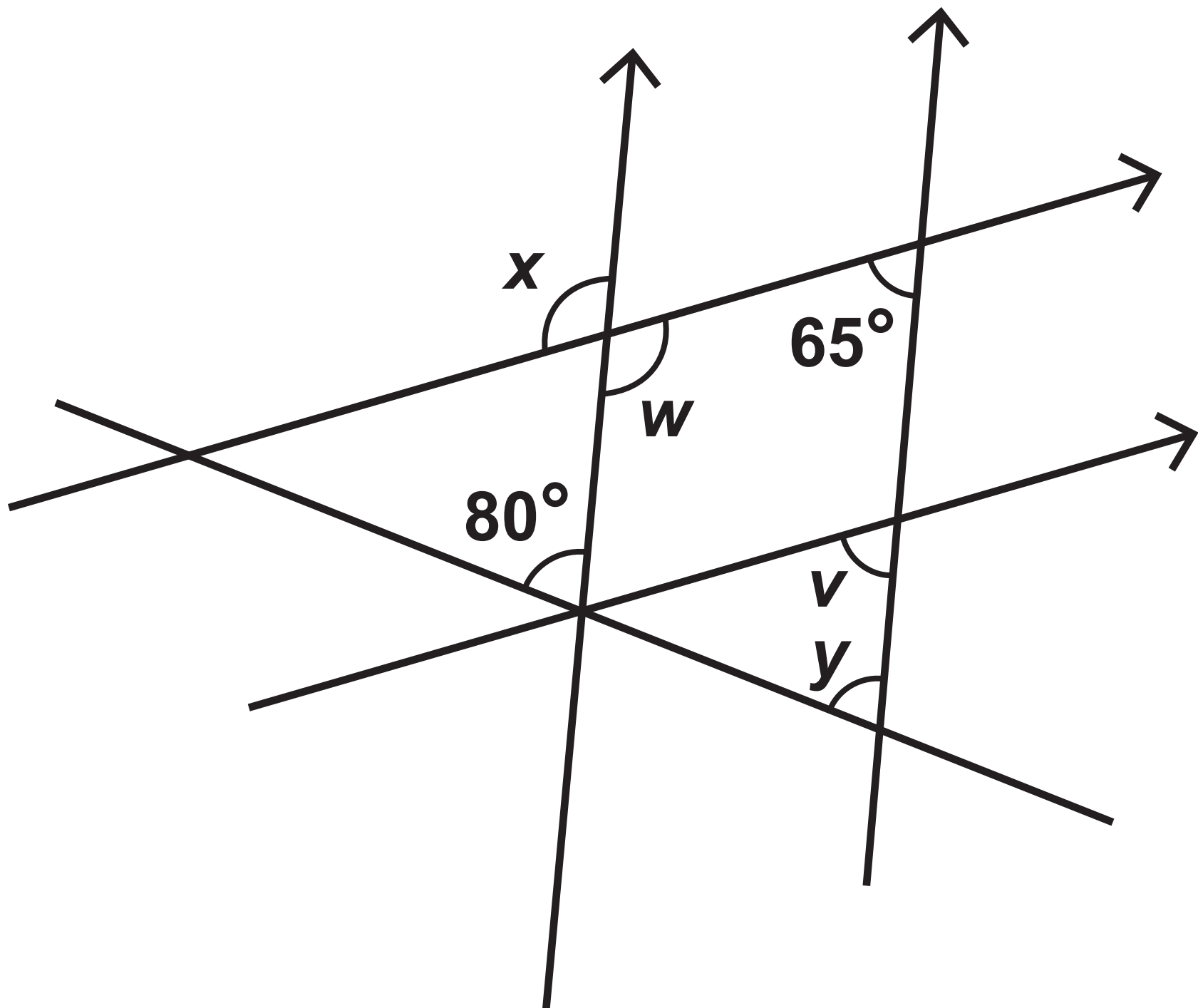
SPECIAL OFFER

22% off the fee per person when

4 people stay in the same tent

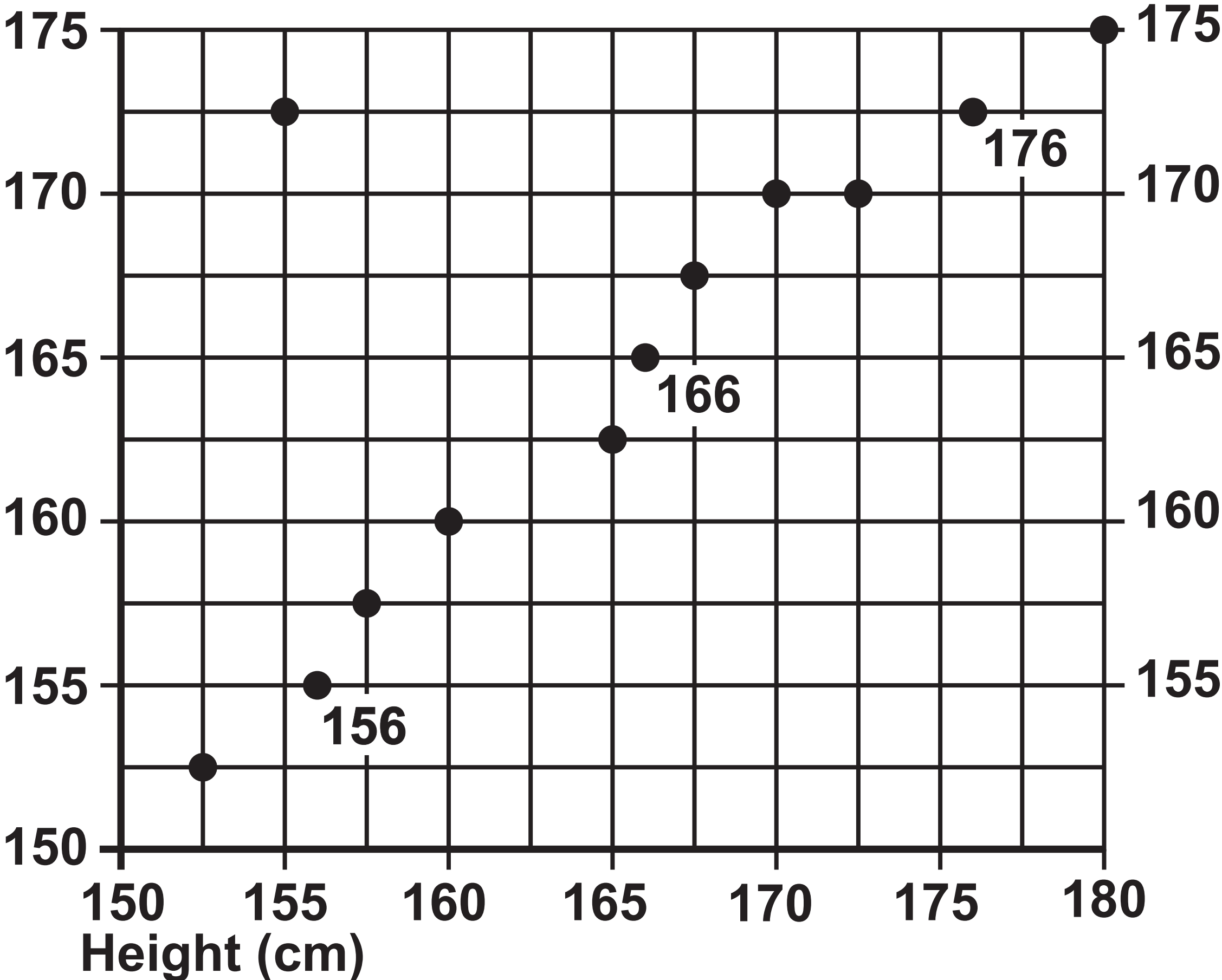
Question 9

Diagram NOT drawn to scale



Question 11

Arm span (cm)



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MATHEMATICS – NUMERACY



**FORMULA LIST
FOUNDATION TIER
GCSE**

**You must not write on these formula
pages.**

**Anything you write on these formula
pages will gain NO credit.**

Formula List – Foundation Tier

Area of trapezium $= \frac{1}{2} (a + b) h$

