



GCSE

3310U30 – 1

THURSDAY, 8 MAY 2025 – MORNING

**MATHEMATICS – NUMERACY
UNIT 1: NON – CALCULATOR
INTERMEDIATE TIER**

**1 hour 45 minutes plus your additional
time allowance**

**THE USE OF A CALCULATOR IS NOT
PERMITTED IN THIS EXAMINATION**

Surname: _____

First name(s): _____

Centre Number: _____

Candidate Number: 0 _____

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.	5	
2.	14	
3.	5	
4.	7	
5.	6	
6.	3	
7.	3	
8.	4	
9.	4	
10.	6	
11.	5	
12.	4	
13.	6	
14.	3	
15.	5	
Total	80	

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.

A model for Question 2 (d) and Question 14.

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 all work written on the additional page(s).

Take π as $3 \cdot 14$

(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 5, the assessment will take into account the quality of your linguistic and mathematical organisation, communication and accuracy in writing.

(Turn over)

1. Look at the diagram for Question 1 in the separate Diagram Booklet.

The diagram shows a conversion graph for furlongs and yards.

Furlongs and yards are both measures of length.

In the past, these measures were used in farming.

The conversion graph can be used to convert between furlongs and yards.

Complete each of the following statements.

- (a) 330 yards is equal to
_____ furlongs.

[1 mark]

1. (b) 7 furlongs is equal to
_____ yards.

[2 marks]

continued on the next page . . .

(Turn over)

Question 1 continued

**1. (c) 1320 yards is equal to
_____ furlongs.**

[2 marks]

(Turn over)

2. Viktor is a farmer.

(a) Viktor wants to buy some animal feed for his sheep.

**Look at the information for
Question 2 (a) in the separate
Diagram Booklet.**

**He can EITHER buy a bag of Sean
Sheep Mix or a bag of
Rugged Sheep Mix.**

**Which of these two animal feeds is
cheaper and by how much?**

(Turn over)

(Turn over)

_____ Sheep Mix is cheaper
It is cheaper by £ _____

[5 marks]

continued on the next page . . .

(Turn over)

Question 2 continued

2. (b) A bag of feed for Viktor's chickens usually costs £26

This week, Viktor gets a discount.

The feed will now cost £21

By what fraction has the chicken feed been discounted?

Circle your answer.

$\frac{21}{26}$	$\frac{26}{21}$	$\frac{5}{21}$	$\frac{5}{26}$	$\frac{26}{5}$
-----------------	-----------------	----------------	----------------	----------------

[1 mark]

continued on the next page . . .

(Turn over)

Question 2 continued

2. (c) Viktor sells butter and ice cream in his farm shop.

**He sells his butter
in 250 g packets.**

Each packet costs £3.25

**Sioned buys 500 g of butter and
1.5 litres of ice cream.**

**She pays a total of £18.50 for the
butter and the ice cream.**

**Calculate the cost of 1 litre of
ice cream.**

(Turn over)

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(Turn over)

1 litre of ice cream costs £ _____

[4 marks]

continued on the next page . . .

(Turn over)

Question 2 continued

- 2. (d) Ask for the model for Question 2 (d). The model is NOT made to scale. The model represents a water trough.**

Viktor orders a new water trough for his cows.

It is in the shape of a cuboid.

The internal measurements are:

**length 4 m, width 0.5 m
and height 0.8 m.**

- (i) Calculate the capacity of the new water trough in m³**

(Turn over)

Capacity is _____ m³
[2 marks]

continued on the next page . . .

(Turn over)

Question 2 (d) continued

2. (d) (ii) The external measurements of the new water trough are:

length 4•1 m, width 0•6 m and height 0•9 m.

Look at the formula for Question 2 (d) (ii) in the separate Diagram Booklet.

The cost of delivery of the new water trough is calculated using the formula shown.

The length, width and height are the EXTERNAL measurements in metres.

continued on the next page . . .

(Turn over)

Question 2 (d) (ii) continued

**Calculate the delivery cost for
the new water trough.**

[2 marks]

(Turn over)

3. Look at Diagram 1 for Question 3 in the separate Diagram Booklet.

The diagram is a pie chart.

The diagram IS accurately drawn.

Ralph and Dewi completed surveys with different groups of people.

They asked people to describe where they live.

Ralph's results are shown in Diagram 1

Look at Diagram 2 for Question 3 in the separate Diagram Booklet.

The diagram is a Venn diagram.

The Venn diagram shows the results of Dewi's survey.

continued on the next page . . .

(Turn over)

Question 3 continued

3. (a) In RALPH'S SURVEY, 480 people answered 'Town or city'.

Calculate the number of people who answered 'Seaside' in Ralph's survey.

(Turn over)

[3 marks]

continued on the next page . . .

(Turn over)

Question 3 continued

- 3. (b) (i) In DEWI'S SURVEY, how many people live by the seaside in a town or city?
Circle your answer.**

430	122	572	662	142
------------	------------	------------	------------	------------

[1 mark]

continued on the next page . . .

(Turn over)

Question 3 (b) continued

- 3. (b) (ii) Calculate how many people in Dewi's survey did NOT live by the seaside.**

Circle your answer.

462	694	552	604	430
------------	------------	------------	------------	------------

[1 mark]

(Turn over)

- 4. On a flight to Spain, the cabin crew started serving drinks to passengers at 11:00 a.m.**

The flight manager recorded the length of time each passenger had to wait to be served.

Look at the diagram for Question 4 in the separate Diagram Booklet.

The diagram is a frequency diagram.

The flight manager has drawn this frequency diagram to display her findings.

continued on the next page . . .

(Turn over)

Question 4 continued

**She used groups of width
10 minutes:**

$0 \leq \text{time} < 10$, $10 \leq \text{time} < 20$, and so on.

- 4. (a) How many passengers waited less
than 10 minutes to be served?**

[1 mark]

continued on the next page . . .

(Turn over)

Question 4 continued

**4. (b) How many passengers were on
this flight to Spain?**

[2 marks]

continued on the next page . . .

(Turn over)

Question 4 continued

- 4. (c) What fraction of the total number of passengers had to wait 40 minutes or more to be served a drink?**

Express your answer in its simplest form.

(Turn over)

[2 marks]

4. (d) What is the modal group of these recorded times?

[1 mark]

continued on the next page . . .

(Turn over)

Question 4 continued

4. (e) The flight manager says,

Consider the passengers who waited between 30 minutes and 40 minutes to be served.

If 8 of these passengers had been served 10 minutes faster, the modal group would have been different.

Is the flight manager correct?

Give a reason for your answer.

Yes

☐

No

☐

(Turn over)

30

[1 mark]

(Turn over)

5. IN THIS QUESTION YOU WILL BE ASSESSED ON THE QUALITY OF YOUR ORGANISATION, COMMUNICATION AND ACCURACY IN WRITING.

Ewan keeps bees and sells jars of honey.

He buys two different sizes of jar for the honey.

- An empty small jar costs 12p and can hold 200 ml of honey.**
- An empty large jar costs 20p and can hold 500 ml of honey.**

continued on the next page . . .

(Turn over)

Question 5 continued

Ewan works out how much to charge for each jar of honey, by:

- **calculating the cost of the honey in the jar**
- **adding on the amount he paid for the jar.**

For both sizes of jar, Ewan charges the SAME PRICE PER 100 ml for the honey itself.

Ewan charges his customers £3.40 for a 500 ml jar of honey.

This price is for the honey and the jar.

continued on the next page . . .

(Turn over)

Question 5 continued

**How much should Ewan charge for
a 200 ml jar of honey?**

You must show all your working.

(Turn over)

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35

[4 marks + 2 marks OCW]

(Turn over)

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

A survey was carried out to find how many books children read during the holidays.

The information shows the two questions that were asked in a questionnaire.

(a) (i) Give ONE reason why Q1 was NOT a suitable question.

[1 mark]

continued on the next page . . .

(Turn over)

Question 6 (a) continued

6. (a) (ii) Give ONE reason why Q2 was NOT a suitable question.

[1 mark]

continued on the next page . . .

(Turn over)

Question 6 continued

- 6. (b) The survey was carried out by asking children as they left the library on a Saturday morning. Give ONE criticism of how the survey was carried out.**

[1 mark]

(Turn over)

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

The diagram IS drawn to scale.

The scale drawing shows a plan of a stage in a theatre.

The stage measures 20 metres by 12 metres.

The scale used is

1 cm REPRESENTS 1 metre.

An 'X' will be marked on the stage where a microphone is to be placed.

continued on the next page . . .

(Turn over)

Question 7 continued

The 'X' must be:

- **equidistant from the front of the stage and the right wing**
- **4 metres from the front of the stage.**

Draw suitable lines on the plan and show where the 'X' will be marked.

[3 marks]

(Turn over)

8. Nadya borrowed £500 from a loan company.

The loan company told her that she would pay more than 100% interest.

Nadya paid off the loan and interest completely by paying back £55 each month for 2 years.

What percentage interest did Nadya actually pay?

You must show all your working.

(Turn over)

[4 marks]

(Turn over)

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

Last year, Jade's total income before tax was €20 000

The table shows the tax bands, taxable income and tax rates last year.

Calculate Jade's TOTAL tax bill last year.

You must show all your working.

(Turn over)

[4 marks]

(Turn over)

10. When Hassan has a bath, he fills it with 30 gallons of water.

When Hassan has a shower, water flows from his shower at a rate of 0.2 litres per second.

Hassan uses the same amount of water whether he has a bath or a shower.

How long does he spend in the shower?

Give your answer in minutes and seconds.

You must show all your working.

Use: 1 gallon $\approx$ 4.5 litres
--

[illegible]

(Turn over)

Time in the shower

is _____ minutes _____ seconds

[6 marks]

(Turn over)

11. Dafydd and Mia both play musical instruments.

(a) Dafydd and his mum share the cost of buying a saxophone in the ratio 3 : 7

His mum's share of the cost is £280

How much will this saxophone cost to buy?

(Turn over)

[3 marks]

continued on the next page . . .

(Turn over)

Question 11 continued

11. (b) Mia takes her violin to be valued every year.

This year, it is valued at £660

The violin has increased in value by 20% from last year.

Calculate how much Mia's violin was worth last year.

(Turn over)

[2 marks]

(Turn over)

12. Kendrick Nurseries grow tomatoes to sell to supermarkets.

They grow three varieties: Sungold, Roma and San Marzano.

The head gardener recorded the mass of tomatoes from each of 500 plants for each of the three varieties.

Look at the diagram for Question 12 in the separate Diagram Booklet.

The diagram shows three box – and – whisker diagrams. The box – and – whisker diagrams show the masses of the tomatoes for Sungold, Roma and San Marzano.

continued on the next page . . .

(Turn over)

Question 12 continued

**12. (a) What is the range of the masses
for the Sungold tomato plants?**

Range is _____ kg

[1 mark]

continued on the next page . . .

(Turn over)

Question 12 continued

**12. (b) How many of the Roma plants
produced 25 kg or less of
tomatoes?**

_____ plants

[2 marks]

continued on the next page . . .

(Turn over)

Question 12 continued

- 12. (c) The box – and – whisker diagrams show that two of the varieties have the same lower quartile mass.**

Which one of these two varieties produces tomatoes that seem to have a more consistent mass?

Variety of tomato is _____

continued on the next page . . .

Question 12 (c) continued

**Which one of these measures
could you use to help you decide?
Circle your answer.**

Mode
Median
Mean
Interquartile range
Greatest mass

[1 mark]

(Turn over)

13. Look at the diagram for Question 13 in the separate Diagram Booklet.

The diagram is NOT drawn to scale.

The diagram represents Davina's garden labelled *ABCD*.

In the diagram:

***AB* = 600 cm**

***AD* = 400 cm**

***DC* = 900 cm**

***AB* is parallel to *DC*.**

Angle *ADC* is a right angle.

continued on the next page . . .

Question 13 continued

- 13. (a) Davina wants to put a 5 cm layer of topsoil on her garden.**

What volume of topsoil will Davina need for her garden?

Give your answer in cm^3 in STANDARD FORM.

(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.

[5 marks]

continued on the next page . . .

(Turn over)

Question 13 continued

13. (b) Topsoil is sold in $1.5 \times 10^4 \text{ cm}^3$ bags.

**Calculate the number of bags of topsoil that Davina needs to buy.
You must show all your working.**

[1 mark]

(Turn over)

- 14. A solid triangular prism is placed along the bottom of a door to stop draughts.**

Ask for the model for Question 14.

The model is NOT made to scale.

The model represents the solid triangular prism with the end face labelled *ABC*.

Look at the diagram for Question 14 in the separate Diagram Booklet.

The diagram is NOT drawn to scale.

The diagram shows the end face of the prism.

continued on the next page . . .

(Turn over)

Question 14 continued

In the diagram:

$$\mathbf{AB = 4\text{ cm}}$$

$$\mathbf{BC = 3\text{ cm}}$$

$$\mathbf{AC = 5\text{ cm}}$$

Angle ABC is a right angle.

The length of the triangular prism is equal to the width of the door.

The volume of the triangular prism is 546 cm^3

Calculate the width of the door.

You must show all your working.

(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)

64

[3 marks]

(Turn over)

15. Look at the diagram for Question 15 in the separate Diagram Booklet.

The diagram is a cumulative frequency diagram.

Aled is a gardener.

In April, he records how many minutes he spends working in each of his customers' gardens.

He draws this cumulative frequency diagram to display the findings.

(a) Find the median time that Aled spends working in the garden for these customers.

Median is _____ minutes

[1 mark]

continued on the next page . . .

(Turn over)

Question 15 continued

15. (b) For how many customers did Aled spend between 10 and 30 minutes working in their garden?

_____ customers

[1 mark]

continued on the next page . . .

(Turn over)

Question 15 continued

15. (c) For 70% of his customers, Aled thinks that he spends less than 40 minutes working in their garden.

Is Aled correct?

You must show all your working.

Aled is correct

☐

Aled is not correct

☐

(Turn over)

[3 marks]

END OF PAPER
TOTAL 80 MARKS

[illegible]

(Turn over)

[illegible]

(Turn over)

[illegible]



GCSE

3310U30 – 1

THURSDAY, 8 MAY 2025 – MORNING

MATHEMATICS – NUMERACY

UNIT 1: NON – CALCULATOR

INTERMEDIATE TIER

Diagram Booklet

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

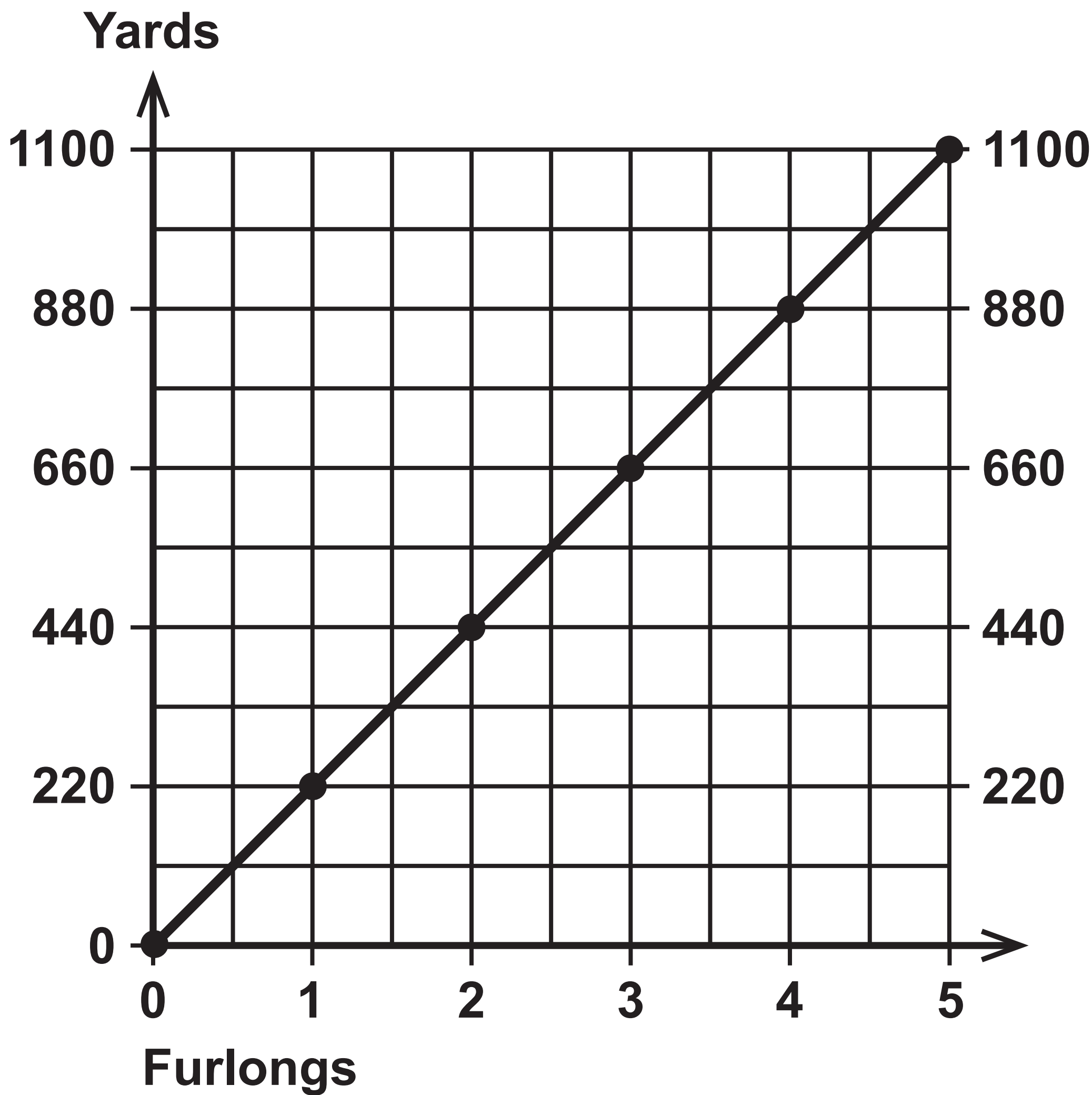
Surname: _____

First name(s): _____

Centre Number: _____

Candidate Number: 0 _____

Question 1



Question 2 (a)

Information

**Sean Sheep
Mix
(20kg bag)**

Was £14

Now 15% off

**Rugged Sheep
Mix
(20kg bag)**

Was £24

Now $\frac{5}{8}$ off

Question 2 (d) (ii)

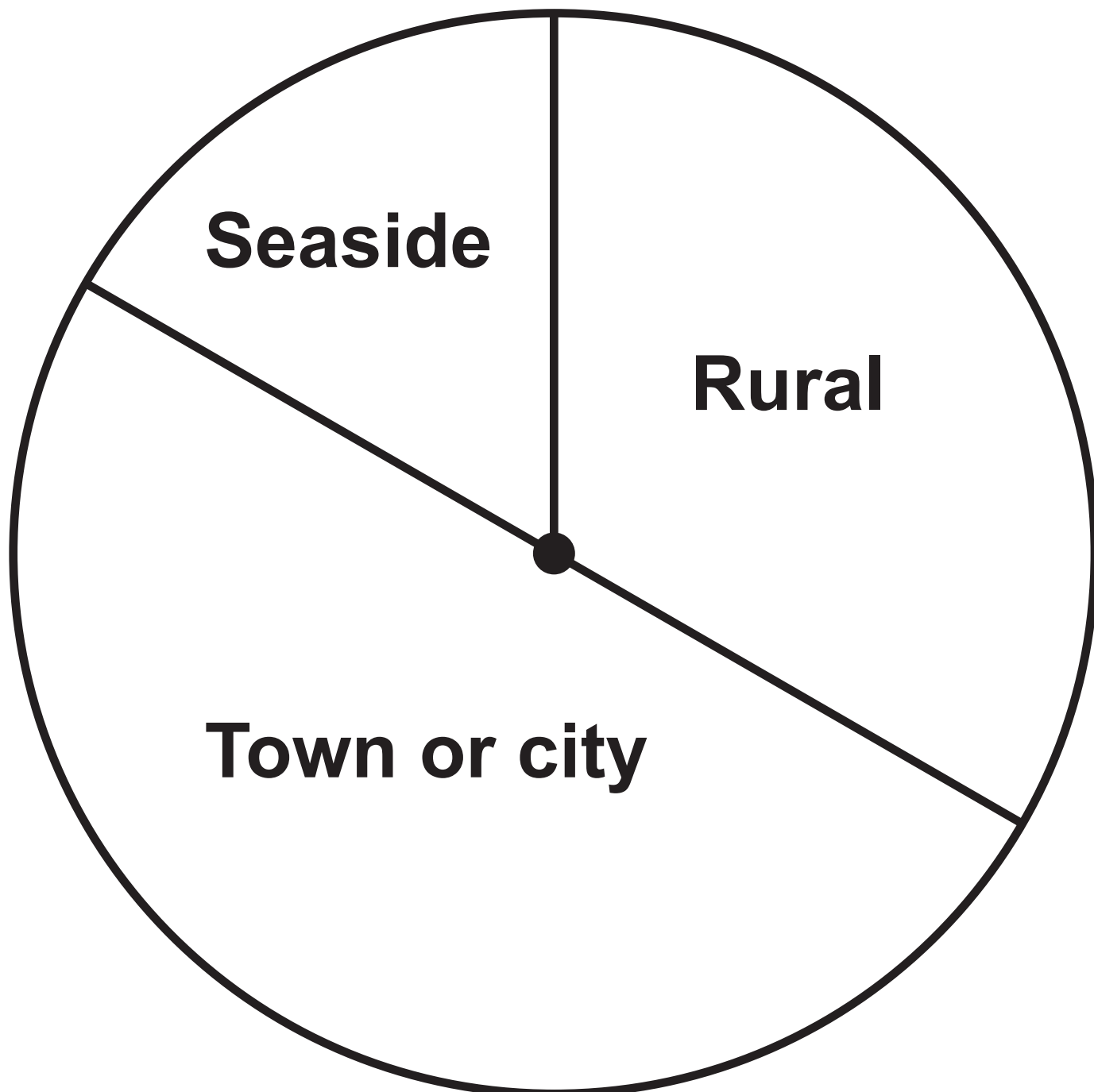
Formula

Delivery cost in £ = 5 × (length + width + height)

Question 3

Diagram 1

Results of Ralph's survey

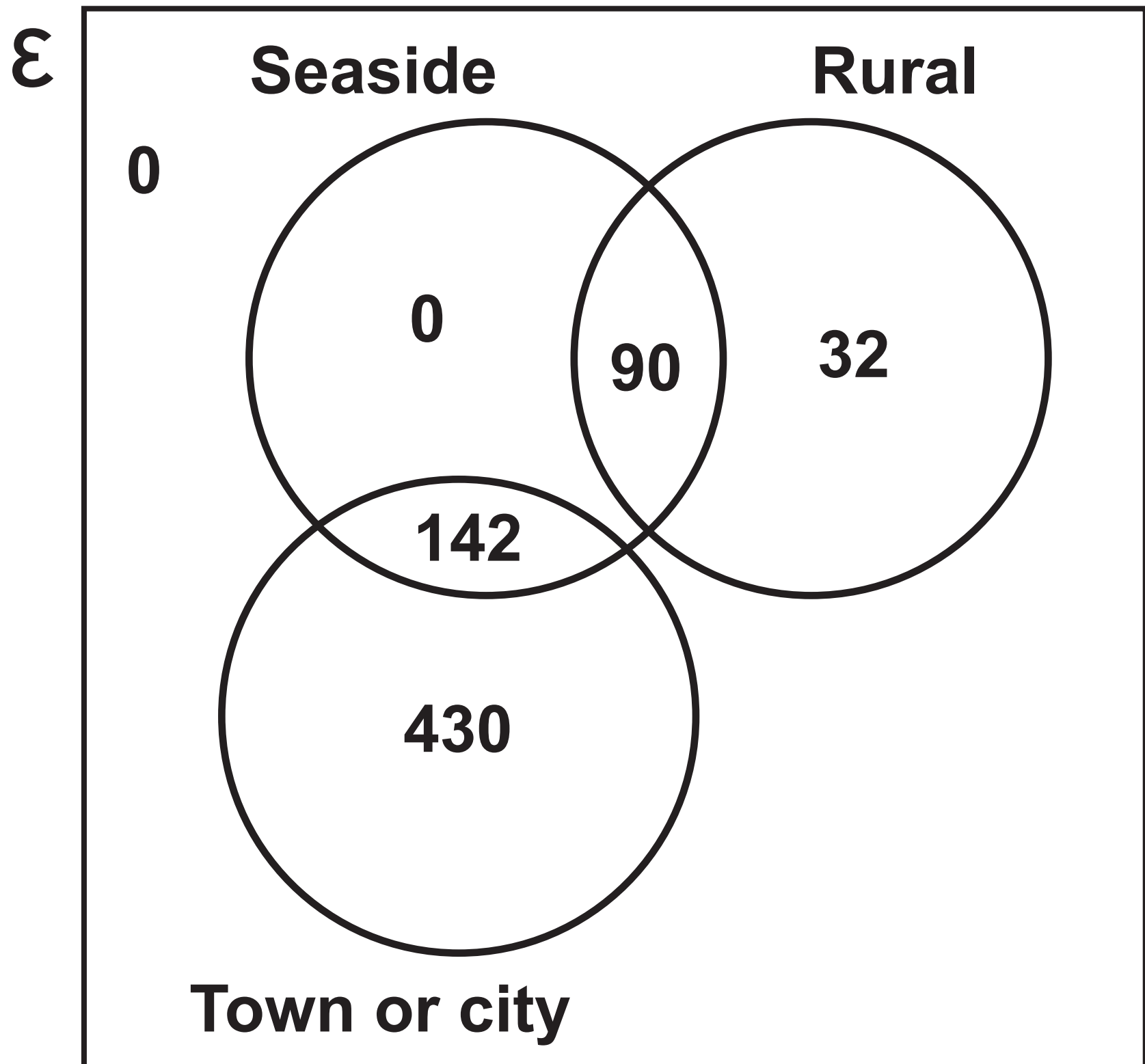


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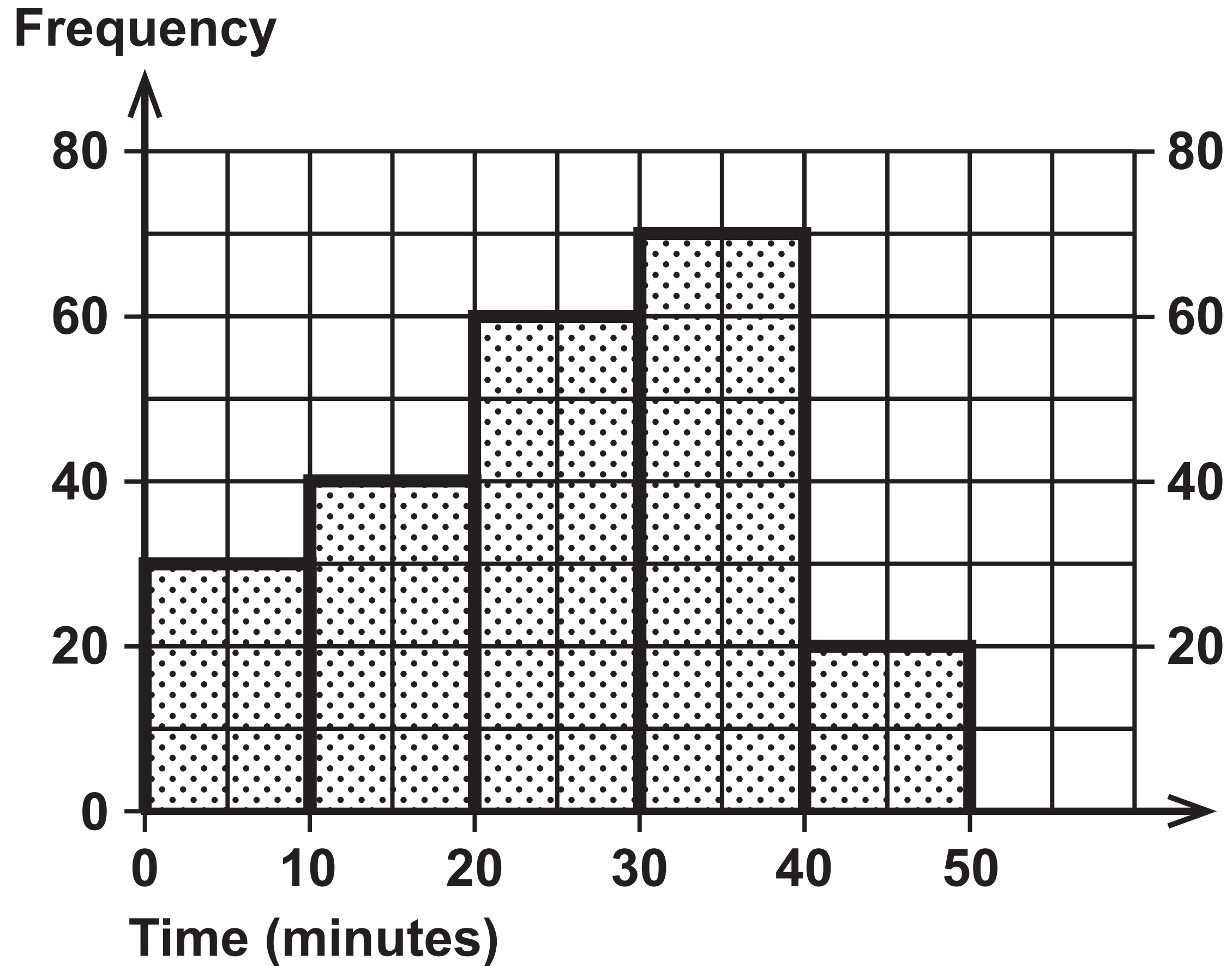
Question 3 continued

Diagram 2

Results of Dewi's survey



Question 4



Question 6

Information

Q1. Most children read lots of books.

Do you read lots of books? _____

Q2. How many books do you read during the holidays?

None

**1 – 10
books**

**10 – 20
books**

**More than
20 books**

☐☐☐☐

Question 7

Scale: 1 cm represents 1 metre

Front

Left wing

Right wing

Back

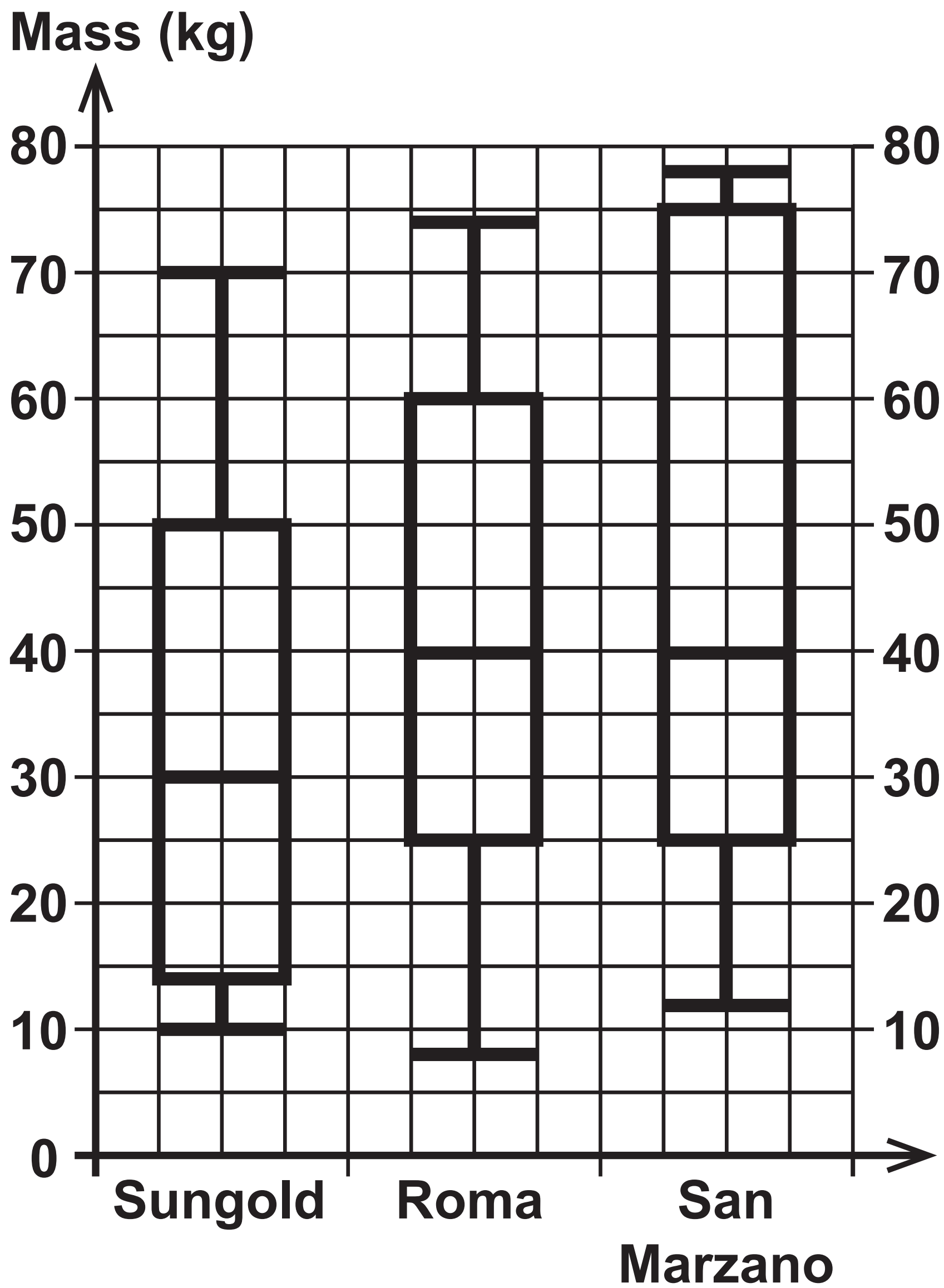


Question 9

Table

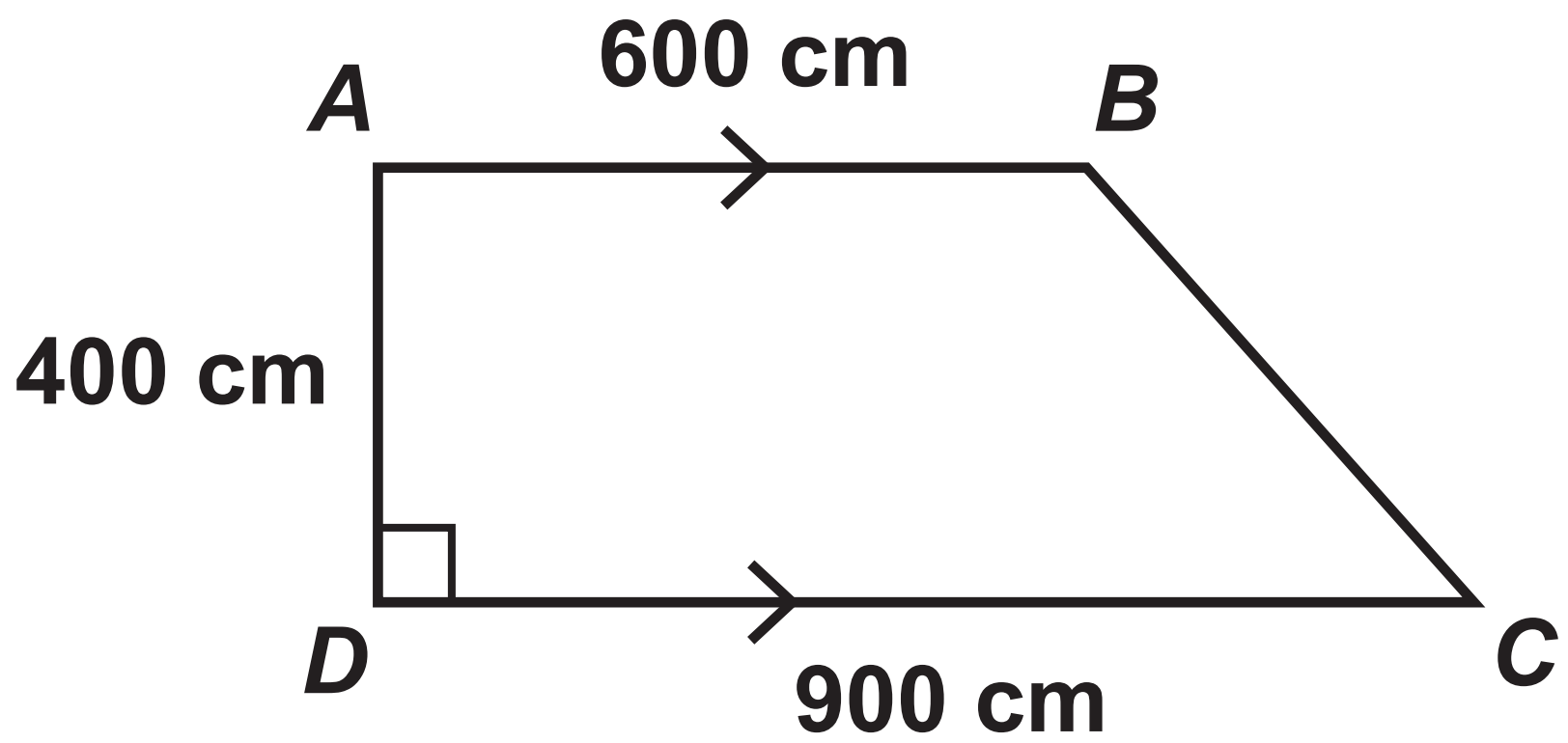
Band	Taxable income	Tax rate
Personal allowance	Up to €10 000	0%
Basic rate	€10 000 to €18 000	10%
Higher rate	over €18 000	20%

Question 12



Question 13

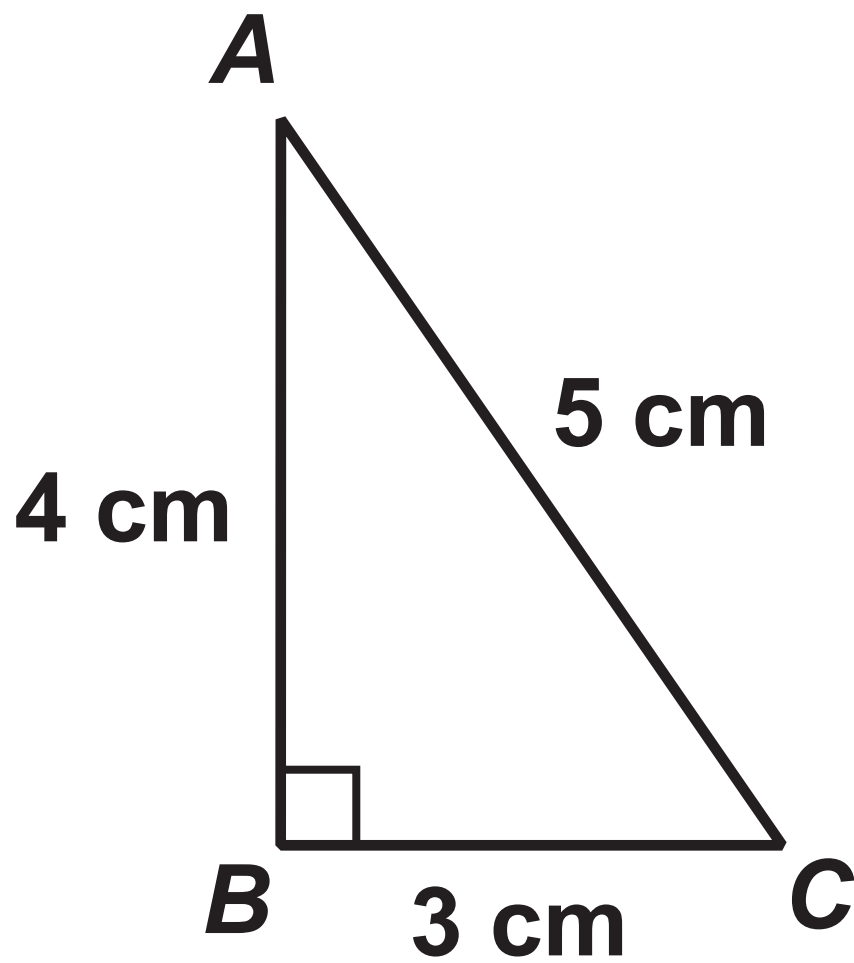
Diagram NOT drawn to scale



Question 14

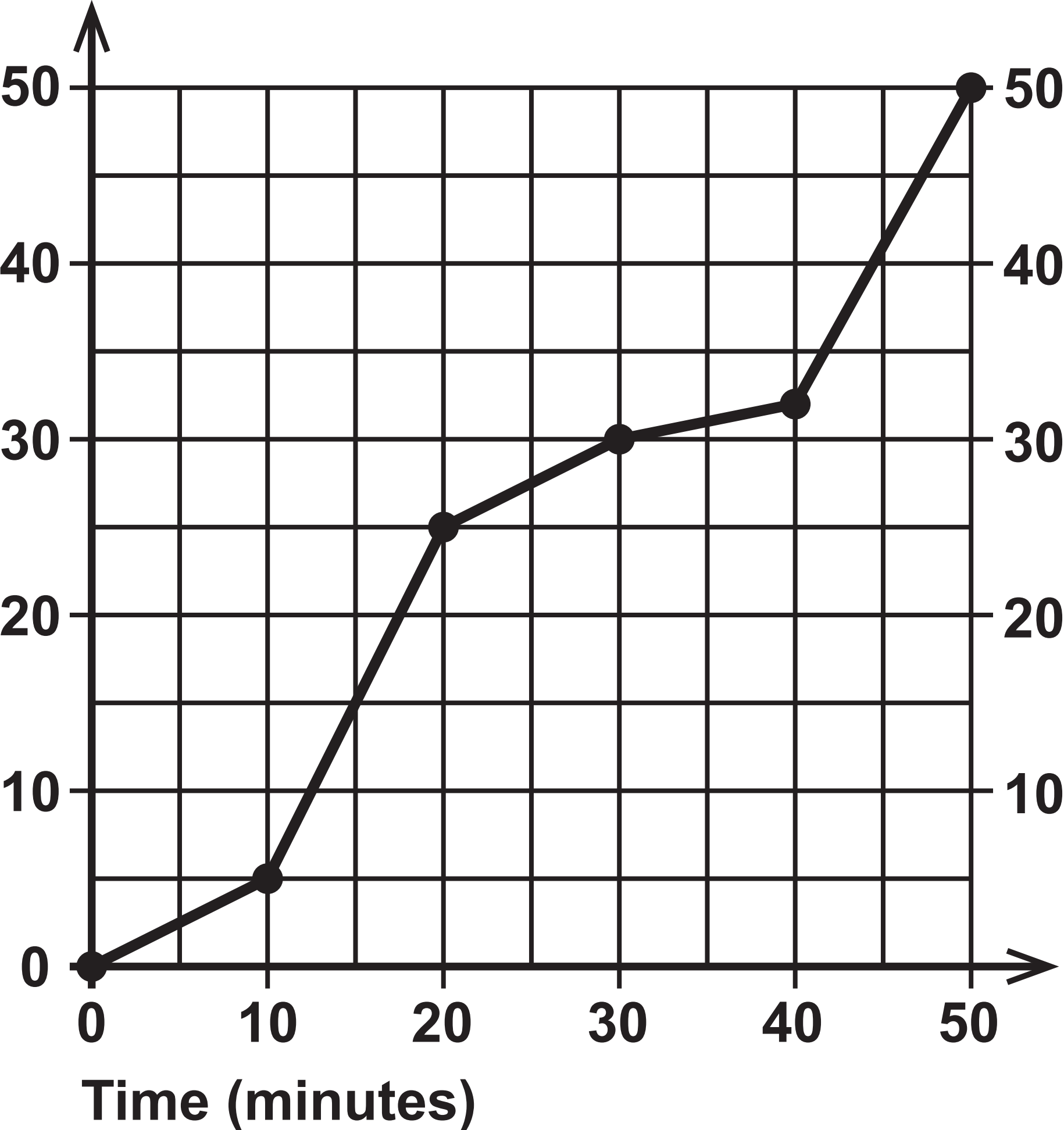
Diagram NOT drawn to scale

End face of the prism



Question 15

Cumulative frequency



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MATHEMATICS – NUMERACY



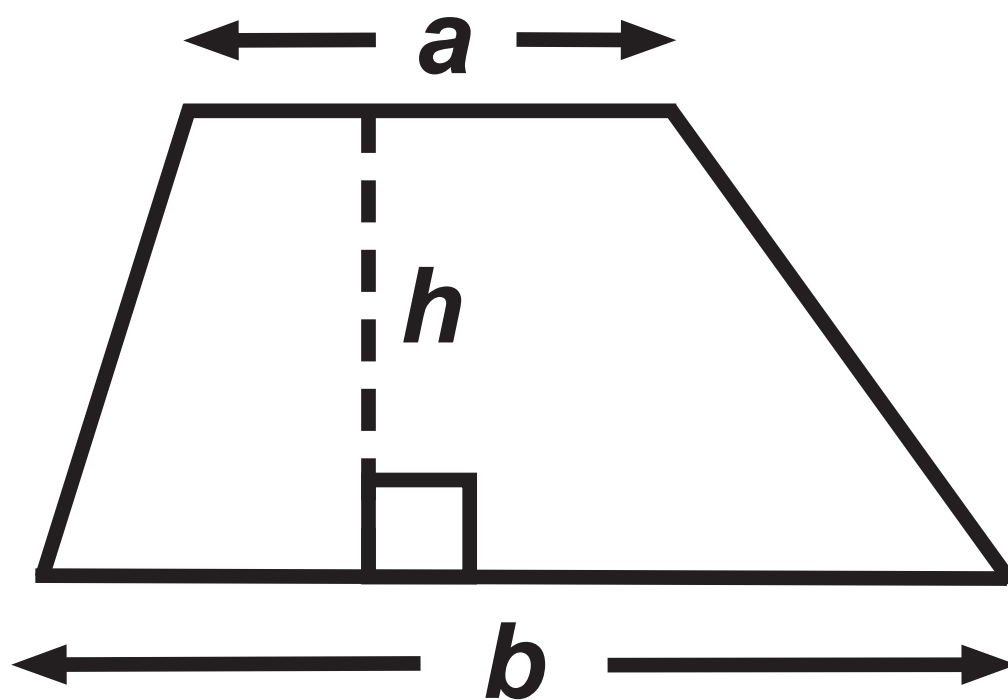
**FORMULA LIST
INTERMEDIATE TIER
GCSE**

**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 $= \frac{1}{2} (a + b) h$



Volume of prism =

area of cross – section $\times$ length

