



GCSE

3310U10 – 1

THURSDAY, 9 MAY 2024 – MORNING

MATHEMATICS – NUMERACY

UNIT 1: NON – CALCULATOR

FOUNDATION TIER

1 hour 30 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.	19	
2.	10	
3.	4	
4.	6	
5.	3	
6.	5	
7.	3	
8.	3	
9.	12	
Total	65	

(Turn over)

ADDITIONAL MATERIALS

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

ITEMS INCLUDED WITH QUESTION PAPER

A separate Formula List.

A separate Diagram Booklet.

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

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.

Write your answers in the spaces provided.

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

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

Take π as $3 \cdot 14$

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

(Turn over)

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

Stuart, Annelise and their children like to
keep fit.

Look at the table for Question 1 (a) in the
separate Diagram Booklet.

The table shows the prices of different
membership types at a local fitness club.

Stuart and Annelise are both aged 42

They have a son aged 14 and a
daughter aged 12

They all want to buy membership of the
fitness club for a year.

continued on the next page...

(Turn over)

[4 marks + 2 OCW]

continued on the next page...

(Turn over)

Question 1 continued

1. (b) Look at the table for Question 1 (b) in the separate Diagram Booklet.

The table gives the number of calories used in one minute when exercising on the gym equipment.

- (i) Stuart uses the rowing machine for **20 minutes**.

How many calories will he use?

[2 marks]

continued on the next page . . .

(Turn over)

Question 1 (b) continued

1. (b) (ii) Annelise uses the cross trainer.

**How many minutes does it take her
to use 360 calories?**

[2 marks]

continued on the next page . . .

(Turn over)

Question 1 continued

1. (c) When Stuart uses the exercise bike, he keeps his upper body at an angle of 45° to the horizontal.

What type of angle is an angle of 45° ?

Circle your answer.

an acute angle
an obtuse angle
a straight line
a right angle
a reflex angle

[1 mark]

continued on the next page . . .

(Turn over)

Question 1 continued

1. (d) The fitness club keeps weekly information about the number of people who attend different fitness classes.

Look at the table for Question 1 (d) in the separate Diagram Booklet.

The table shows the information for the first week of April.

Annelise thinks that the modal fitness class is yoga.

Is she correct?

Yes No

Give a reason for your answer.

[1 mark]

continued on the next page . . .

(Turn over)

Question 1 continued

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

The fitness club wants to lay tiles on the bottom of the swimming pool.

The outline of the bottom of the pool is drawn to scale on the square grid.

Each square on the grid represents a 1 metre square.

The tiler will charge £30 per square metre for laying the tiles.

How much will the tiler charge in total for laying the tiles?

[4 marks]

continued on the next page . . .

(Turn over)

Question 1 continued

1. (f) The tiler has a small van.

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

The diagram is a **SCALE DRAWING** of the van.

The scale of the drawing is **1 cm** represents **50 cm**.

Find the actual length of the van in metres.

Length of van = _____ metres

[3 marks]

(Turn over)

2. (a) Beth and her 3 friends Nadia, Jodie and Saskia organise a 3 – day holiday. They plan to go to Llandudno during the spring or summer of 2025.

They know the following:


- Nadia cannot be away during May or July,
- Beth cannot be away on Saturday or Sunday,
- Saskia cannot be away during the school holidays,
- Jodie cannot be away on the last 3 Tuesdays of each month OR the first 2 Fridays of each month.

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

The calendar shown is for the spring and summer months of 2025.

continued on the next page . . .

Question 2 (a) continued

The school holidays are represented
by  on the calendar.

What would be the **LATEST DATES** when
they could all go for a **3 – day holiday**?

The dates for the **3 – day holiday** are:

[3 marks]

continued on the next page . . .

(Turn over)

Question 2 continued

- 2. (b) Look at the information provided for Question 2 (b) in the separate Diagram Booklet.**

For the holiday, the 4 friends will only be staying in Llandudno for 2 nights. They have a choice between staying in an apartment or in a hotel.

Find the difference between the TOTAL cost of staying at the Pier Apartment and the TOTAL cost of staying at the Promenade Hotel for the 2 nights.

[5 marks]

continued on the next page . . .

(Turn over)

Question 2 continued

2. (c) Saskia is going to make a cake to take with them on holiday.

The top of the cake will be a rectangle of length 24 cm and width 15 cm.

Saskia has enough icing to cover 320 cm^2
Will this be enough icing to cover the top of the cake?

Yes

No

You must show all your working.

[2 marks]

(Turn over)

3. Dafydd always makes Sunday lunch for his family.

This Sunday he is going to cook a turkey.

Look at the information provided for Question 3 in the separate Diagram Booklet.

The instructions for the total time for cooking a turkey are shown.

Dafydd is cooking a 3 kilogram turkey.

He wants to serve it at 2 p.m.

What is the latest time that Dafydd should start the cooking?

You must show all your working.

[4 marks]

[3 marks]

continued on the next page . . .

(Turn over)

25

[3 marks]

(Turn over)

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

The diagram is a travel graph.

On Tuesday, Alfred travelled on a straight road. The graph represents his journey during the day, until the time he arrived home.

- (a) At what time did Alfred arrive home on Tuesday?

[1 mark]

- (b) How far, in total, did Alfred travel during the day on Tuesday?

_____ km

[1 mark]

continued on the next page . . .

(Turn over)

Question 5 continued

5. (c) During which part of the day did Alfred travel at an average speed of 6 km per hour?
Circle your answer.

08:00 to 08:30
08:30 to 12:00
12:00 to 12:30
12:30 to 14:00
14:00 to 15:00

[1 mark]

(Turn over)

6. Erin owns a small shop.

Last year, Erin's income from her shop was **26 000** euros.

Erin had to pay tax on all of this income.

She paid **20%** tax on the first **15 000** euros of this income.

She paid **30%** tax on the rest of this income above **15 000** euros.

Calculate how much tax Erin paid in total.

You must show all your working.

[5 marks]

(Turn over)

7. At a sports event there were **7200** spectators. These spectators watched cycling, athletics, or both.

The entrance fees for the events were as follows.

EVENTS	ENTRANCE FEE
Cycling only	£25
Athletics only	£30
Joint entry to both cycling and athletics	£40

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

The Venn diagram shows the number of tickets bought for the different events.

continued on the next page . . .

[3 marks]

(Turn over)

8. Look at the diagram for Question 8 in the separate Diagram Booklet.

The diagram is a scatter diagram.

Some houses in a village have new driveways laid by DriveDown.

The scatter diagram shows the area and cost of each driveway.

(a) Two of these houses have the same area of driveway.

Calculate the difference in the cost of the new driveway for these two houses.

[2 marks]

continued on the next page...

(Turn over)

Question 8 continued

8. (b) Another house in the village has a driveway of area 25 m^2
Estimate the cost of having a new driveway laid by DriveDown for this house.

[1 mark]

Question 9 continued

9. (b) Siôn keeps ice cream in a freezer in his van. Every hour he checks the temperature in his freezer.

He turns on his freezer at 8 a.m.

The readings he takes from

8 a.m. to 3 p.m. are listed below.

10°C	2°C	-5°C	-12°C
-12°C	-12°C	-13°C	-14°C

- (i) Calculate the mean of these temperatures.

(Turn over)

[3 marks]

9. (b) (ii) At 4 p.m. the temperature in Siôn's freezer was recorded as -16°C
Calculate the mean of the temperatures recorded in Siôn's freezer from 8 a.m. to 4 p.m.

[2 marks]

continued on the next page . . .

(Turn over)

Question 9 continued

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

The diagram is a map.

Siôn parks his ice cream van on the beach, as shown on the map.

(i) How far is Siôn's ice cream van from the lifeguard station?

_____ metres

[2 marks]

continued on the next page . . .

(Turn over)

Question 9 (c) continued

9. (c) (ii) Complete the following statement.

‘The bearing of the lifeguard station from Siôn’s ice cream van is _____^o,

[1 mark]

**END OF PAPER
TOTAL 65 MARKS**

(Turn over)



GCSE

3310U10-1

THURSDAY, 9 MAY 2024 – MORNING

MATHEMATICS – NUMERACY

UNIT 1: NON – CALCULATOR

FOUNDATION TIER

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

Diagram Booklet

Surname: _____

First name(s): _____

Centre Number: _____

Candidate Number: 0 _____

Question 1 (a)

Table

TYPE OF MEMBERSHIP	PRICE PER YEAR
Adult	£380
Senior (aged 60 or over)	£260
Junior (aged 16 or under)	£170
Family (2 adults and 2 juniors)	£920

Question 1 (b)

Table

EQUIPMENT	CALORIES USED IN ONE MINUTE
Rowing machine	11 calories
Exercise bike	14 calories
Treadmill	17 calories
Cross trainer	12 calories

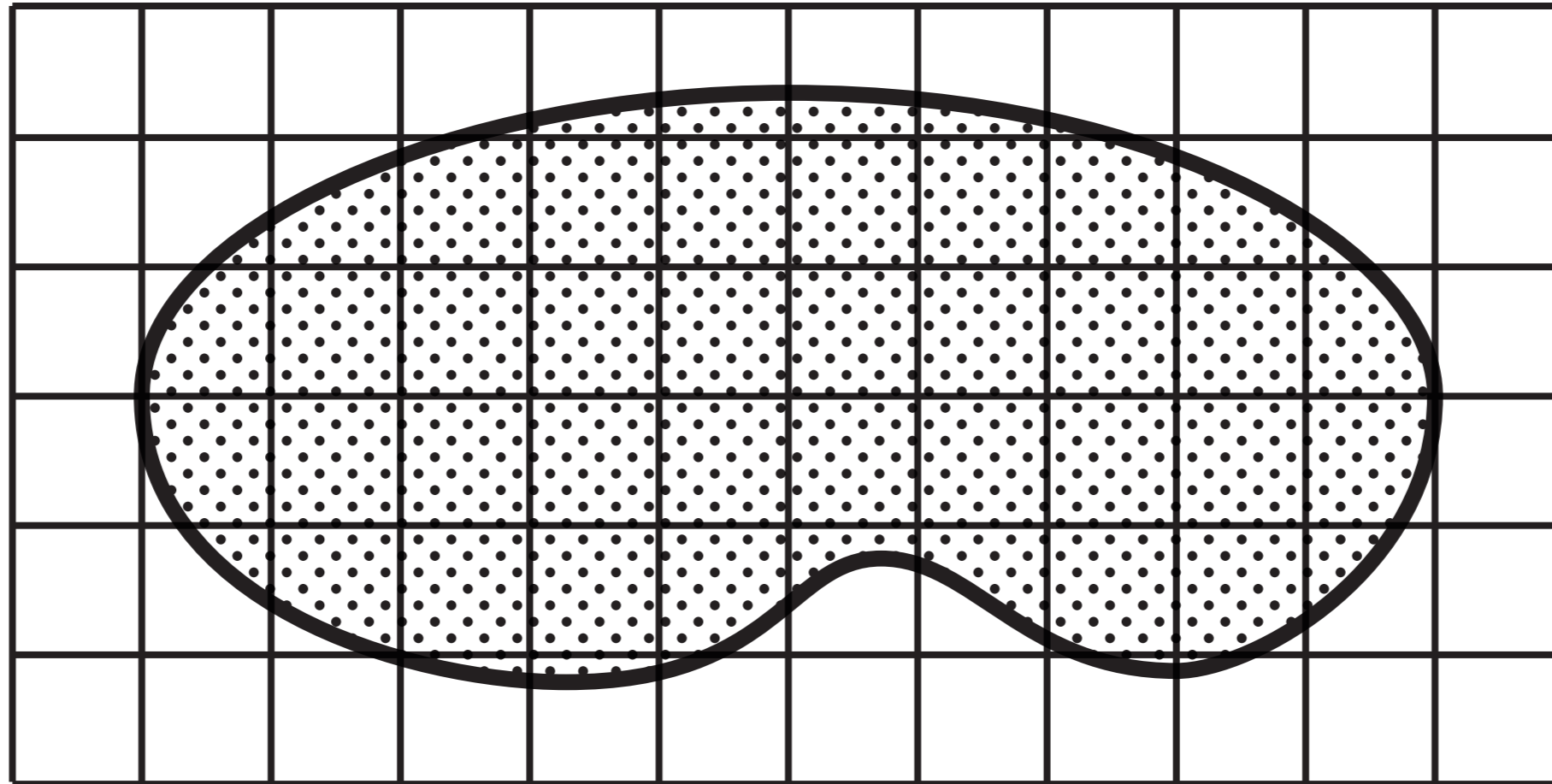
Question 1 (d)

Table

FITNESS CLASS	NUMBER OF PEOPLE
Spin	62
Step	96
Yoga	84
Circuits	88
Zumba	57

Question 1 (e)

Scale: 1 square represents 1 metre.

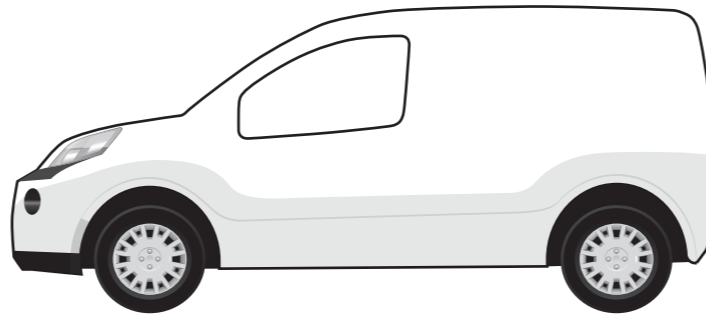


Question 1 (f)

Diagram IS drawn to scale

Scale: 1 cm represents 50 cm

small van



Question 2 (a)

MARCH 2025							APRIL 2025							MAY 2025						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
						1			1	2	3	4	5					1	2	3
2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31
30	31																			
JUNE 2025							JULY 2025							AUGUST 2025						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7			1	2	3	4	5						1	2
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30						27	28	29	30	31			24	25	26	27	28	29	30
														31						

Question 2 (b)

Information

PIER APARTMENT

2 – bedroom apartment

Sleeps 4 people

£250 for 1 night

10% OFF THE TOTAL FOR ANY

2 – NIGHT BOOKINGS

PROMENADE HOTEL

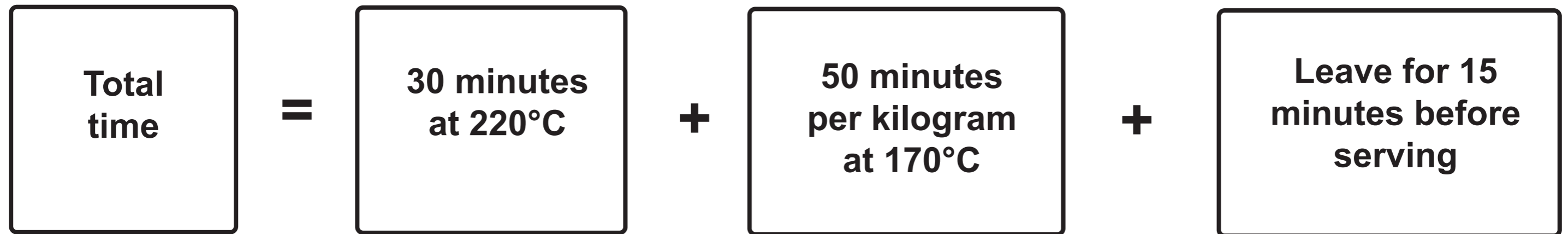
Twin room

(room for 2 people)

£110 per room per night

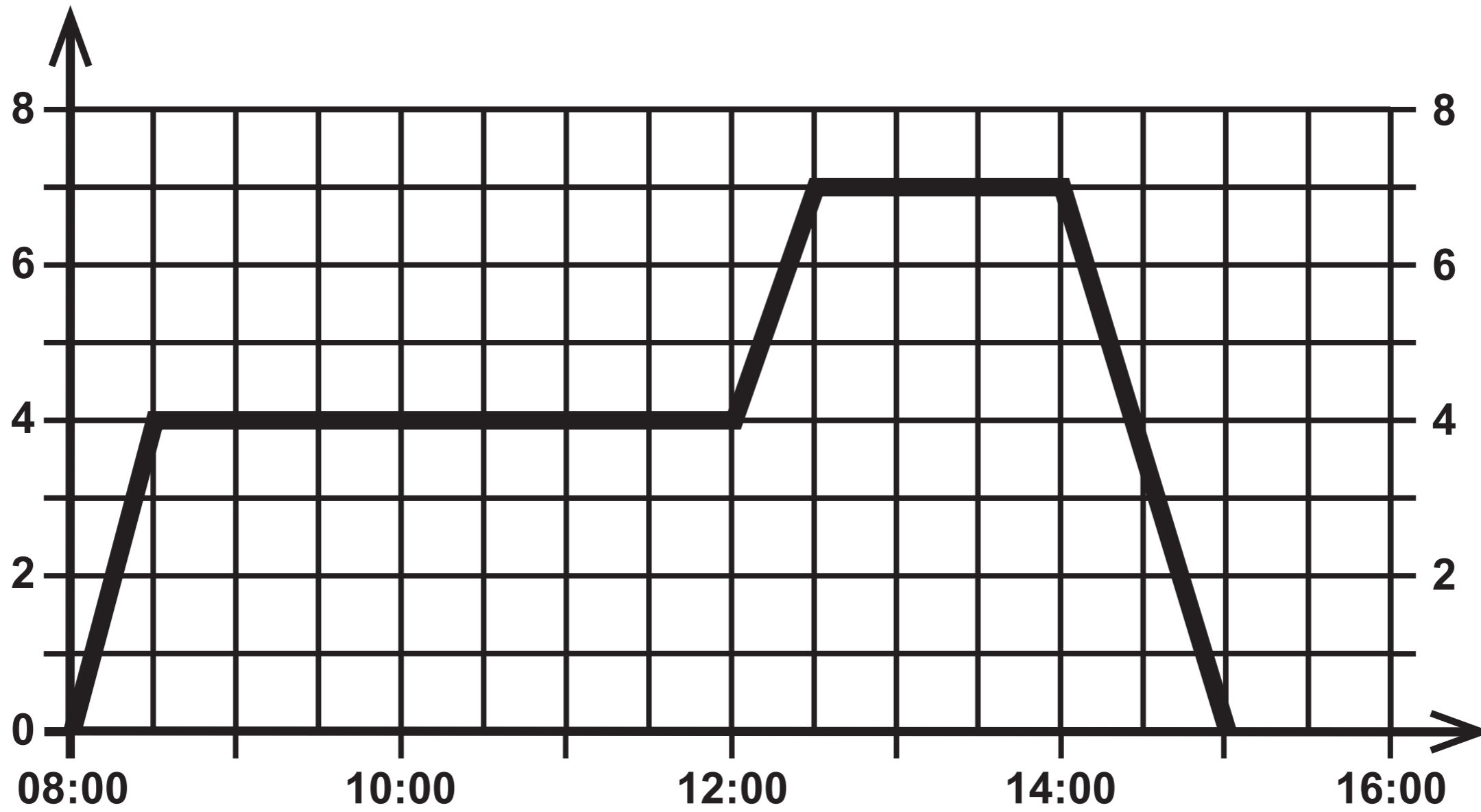
Question 3

The instructions for the total time for cooking a turkey are:



Question 5

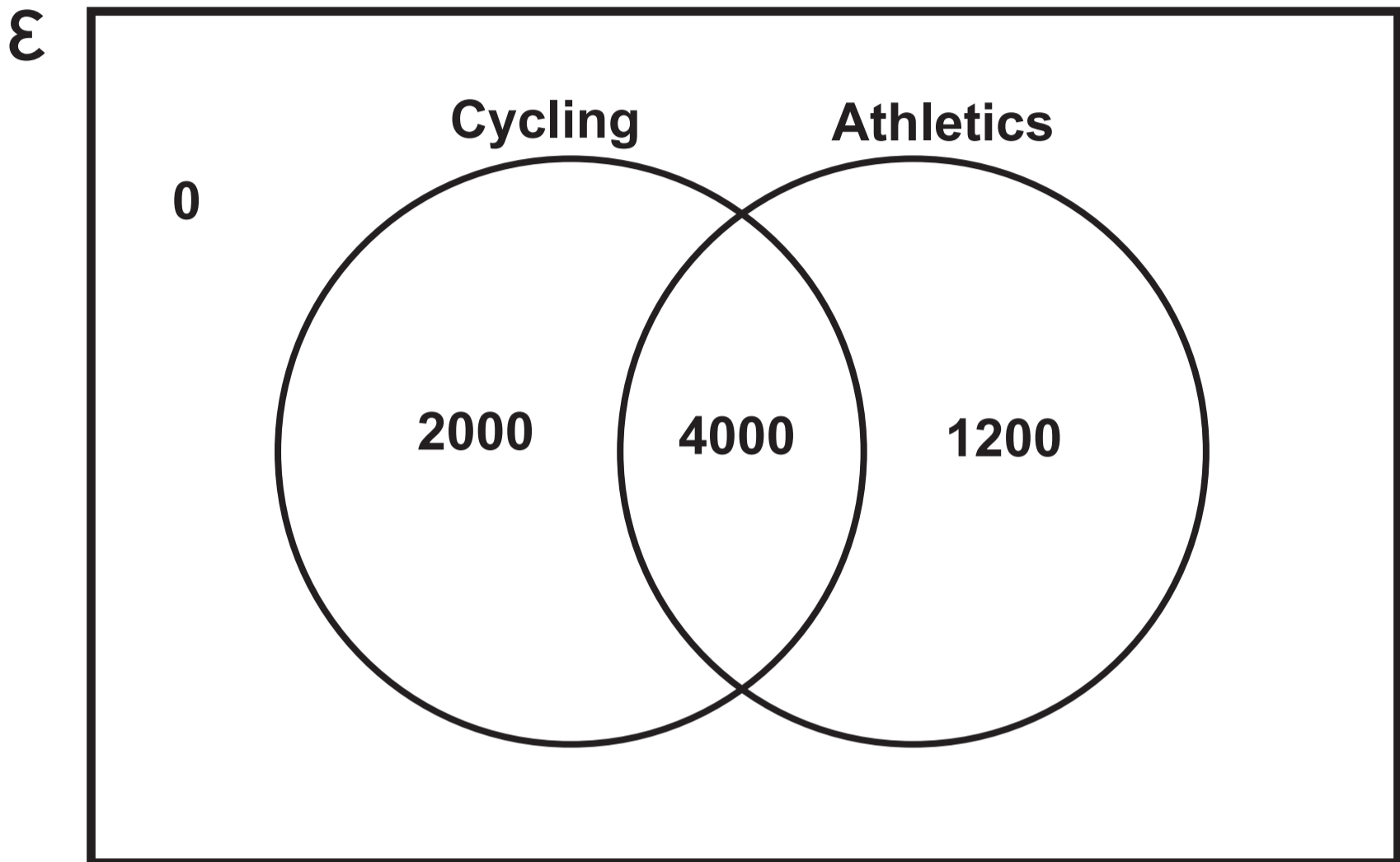
Distance from home (km)



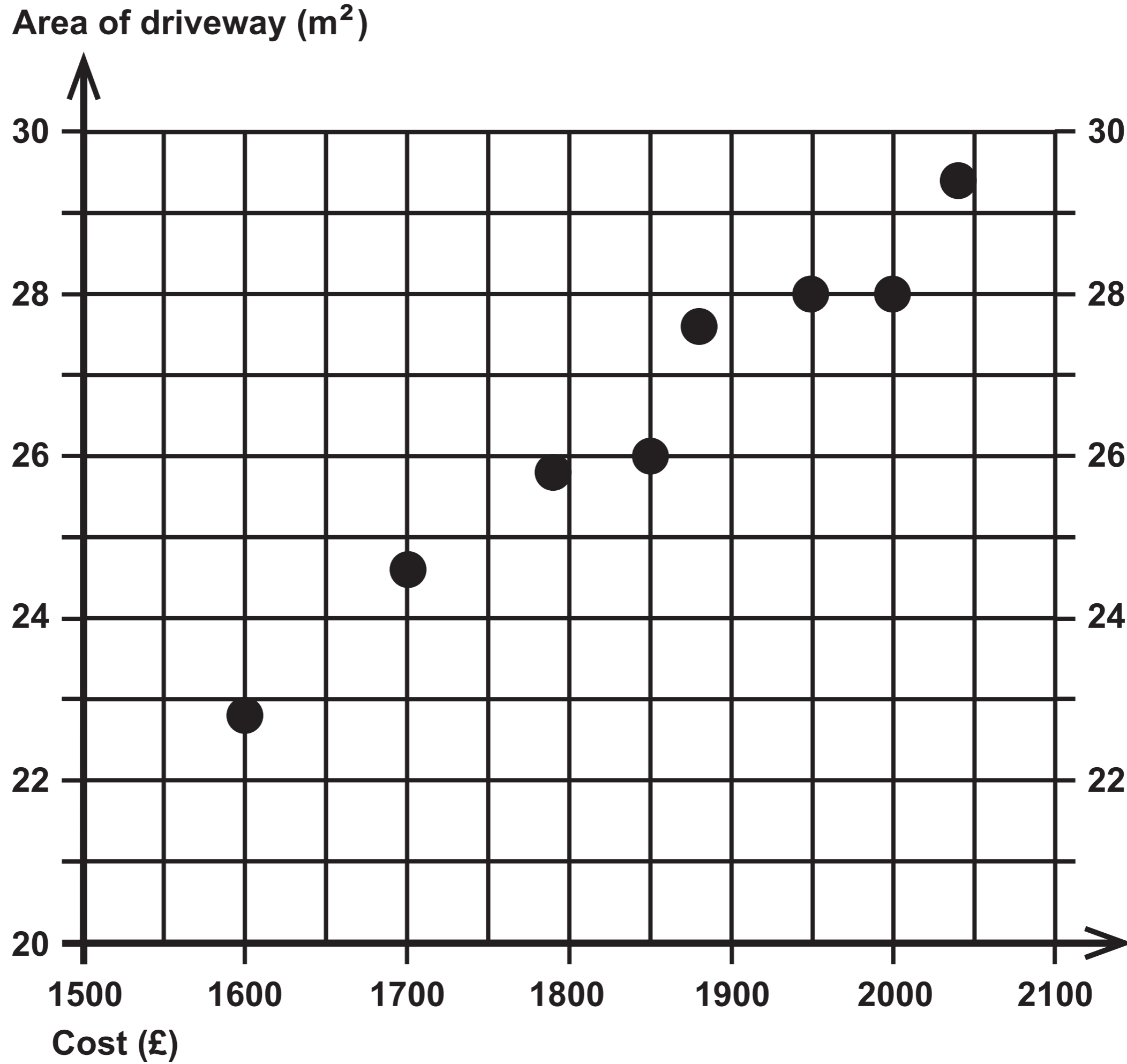
Time

Question 7

Venn diagram

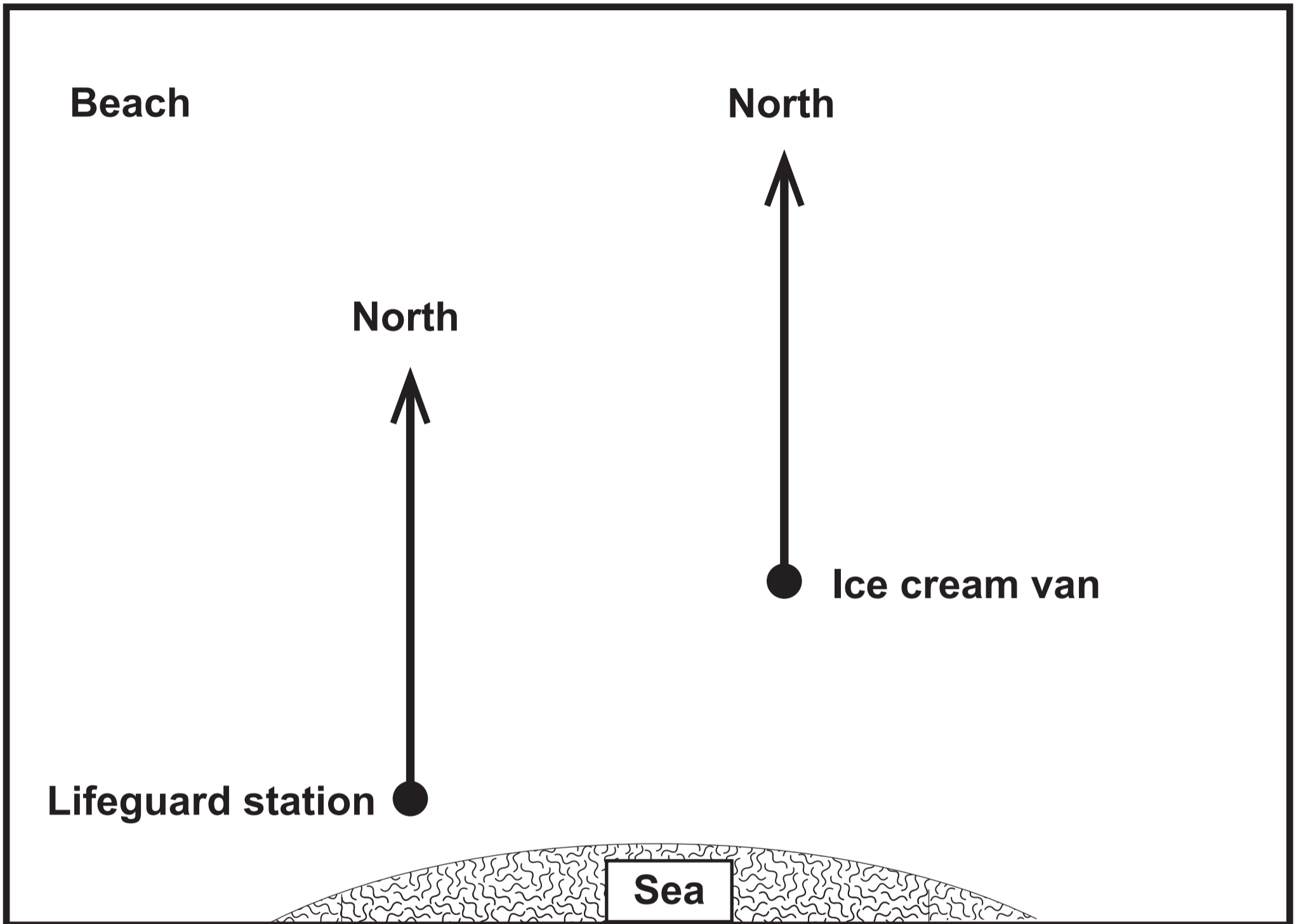


Question 8



Question 9 (c)

Scale: 1 cm represents 20 metres



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

