

Non-calculator Questions

Edexcel

1.

Alan works at a warehouse in Runcorn.

A furniture company needs deliveries from

- Runcorn to Liverpool
- Runcorn to Nantwich.

Alan needs to work out the total delivery charge for these deliveries.
He uses this map.



Scale 1 cm on the map is 10 km on the ground

Alan uses these delivery charges.

distance from Runcorn	charge (£)
less than 20 km	9.99
20 km – 35 km	14.99
over 35 km	24.49

Work out the total delivery charge.
Show how you get your answer.

(4)

£

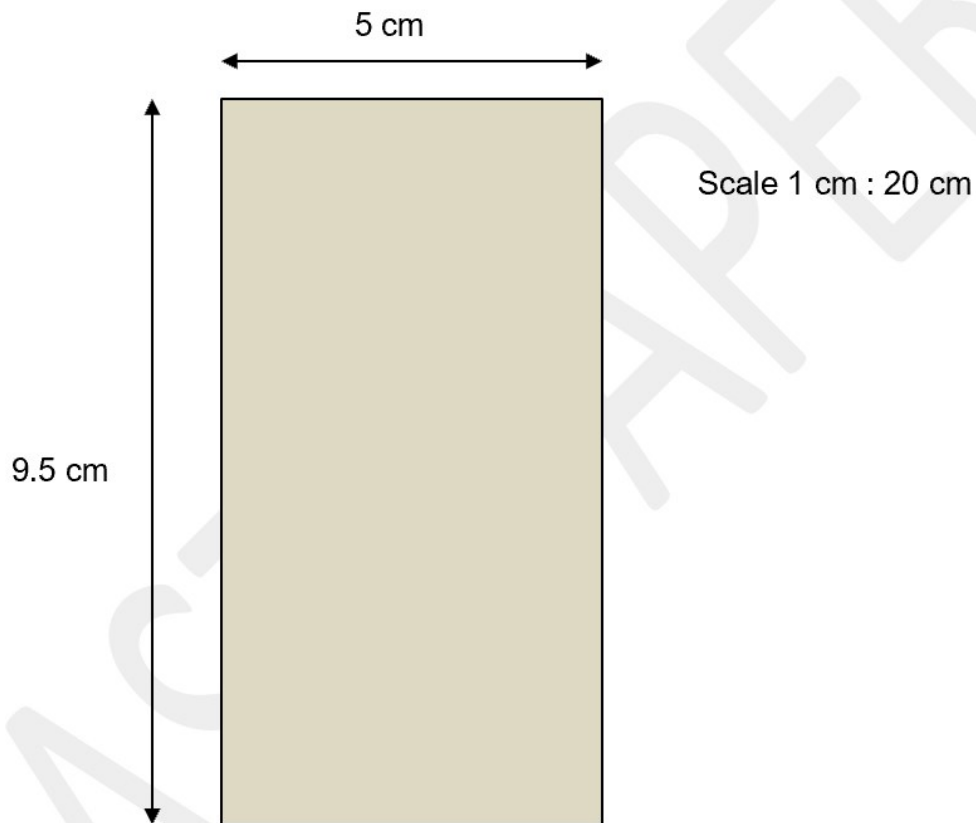
NCFE

2.

Boarding kennels have enclosures where the animals sleep.

Each enclosure must be a minimum of 1.8 m high and 0.9 m wide.

This is a scale diagram showing the front view of an enclosure Linda wants to install.



Is this enclosure big enough?

Show how you decide.

[4 marks]



Your answer:




Open Awards

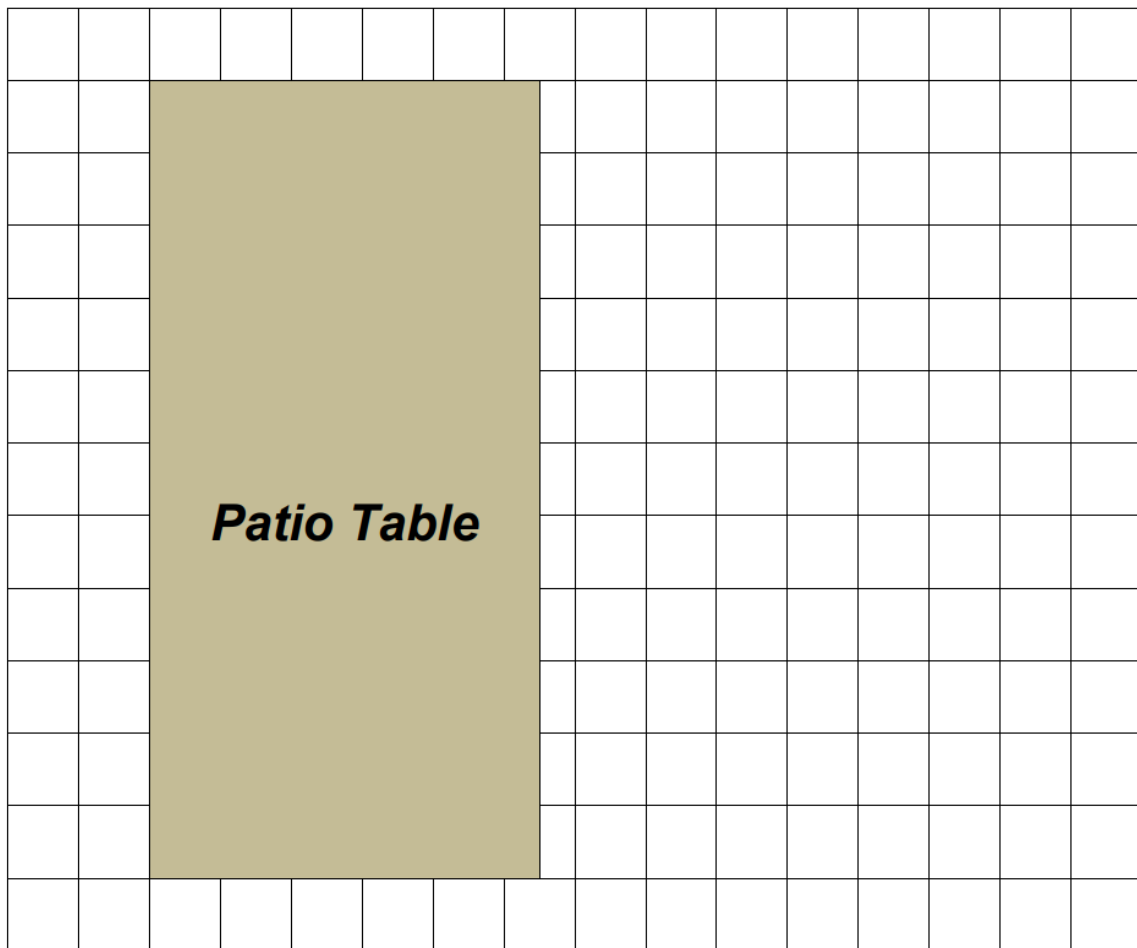
3.

Janice wants to buy a table to put in her patio area. She draws a diagram of her patio to show the size of table she wants.

What are the actual measurements of the table Janice wants?

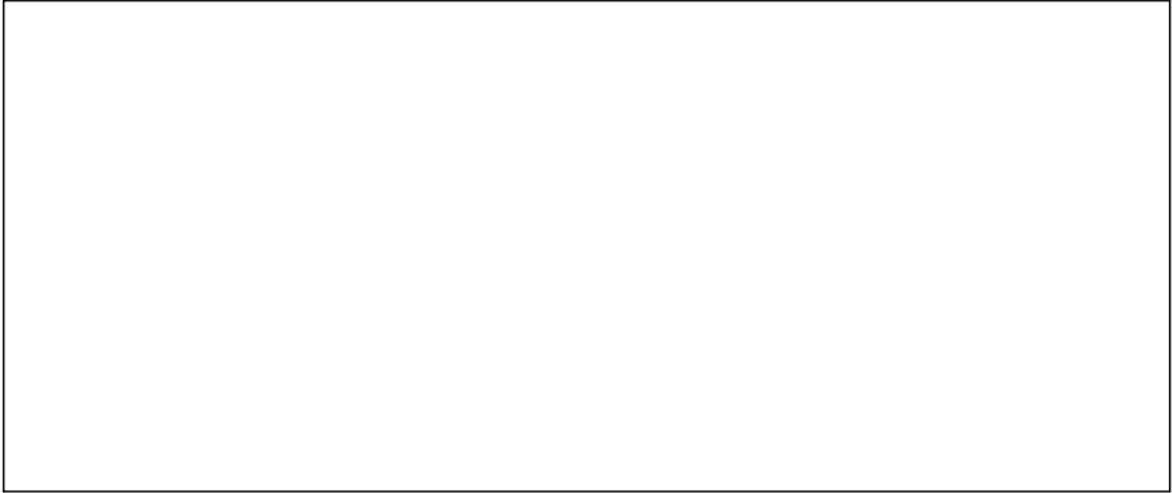
(2 marks)

Scale
 1 box = 20cm x 20 cm



Level 1 Scale Exam Questions

Show your calculations and/or workings out here:



Write your answers in this box.



Level 1 Scale Exam Questions

AQA

4.a)

Erin runs a gardening company.

A customer has asked Erin to design and build a new garden.

The garden will be a rectangle measuring 11 metres by 9 metres.

Here is a list of what the customer wants in the garden.

A paved area

- 2 m by 2 m square
- in one corner

A hedge

- 6 m by 1 m rectangle
- along one edge

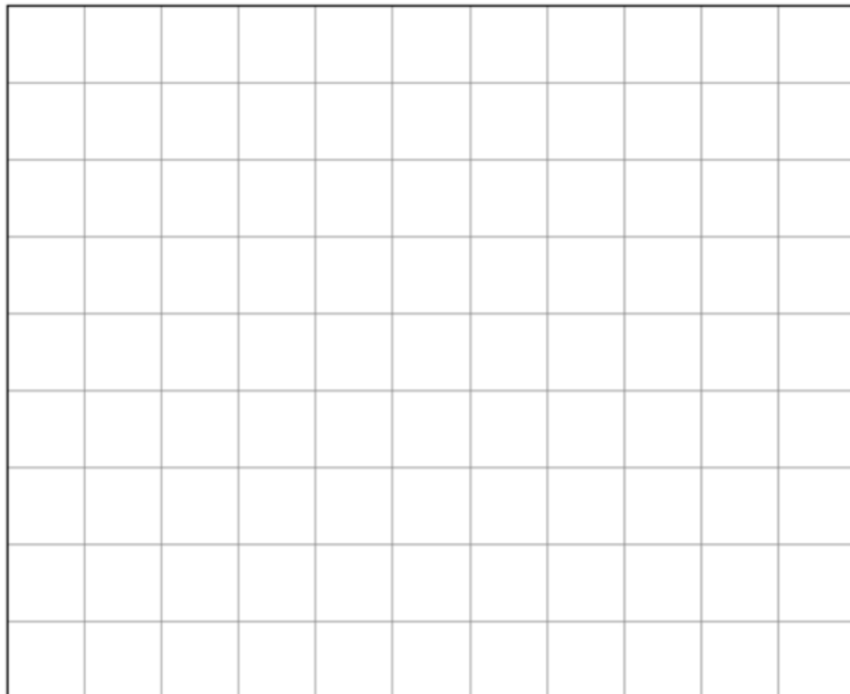
A flower bed

- a circle with a radius of 3 m

On the scale diagram below show a possible design for the garden.

[3 marks]

Scale: 1 cm represents 1 m



b)

The table shows the amounts that Erin charges the customer.

	Charge
Designing the garden	£49.99
Materials	£62.73
Building the garden	£10 per square metre

How much does she charge altogether?

[4 marks]

Answer £ _____

c)

The paved area is a square with sides 2 m long.

The paving stones for this area are squares that measure 50 cm by 50 cm

How many paving stones are needed?

[3 marks]

Answer _____

Level 1 Scale Exam Questions

5.a)

Hanifa is planning a party.

Hanifa hires a hall for the party.

The hall is a rectangle and measures 12 metres by 9 metres.


Here is a list of what she wants in the hall.

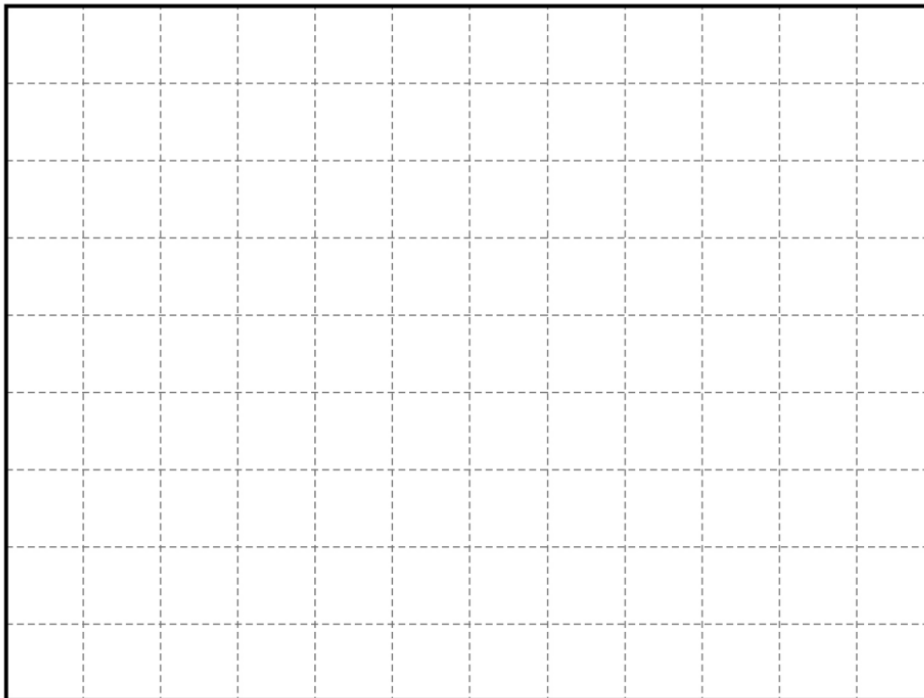
DJ table	1 m by 2 m rectangle
Refreshments table	1 m by 3 m rectangle
Dance floor	5 m by 5 m square

There must be a space of at least 1 metre round each table.

On the scale diagram below, draw and label a possible plan for the hall.

[4 marks]

Scale:  represents a 1 m by 1 m square



Calculator Questions

Edexcel

1.

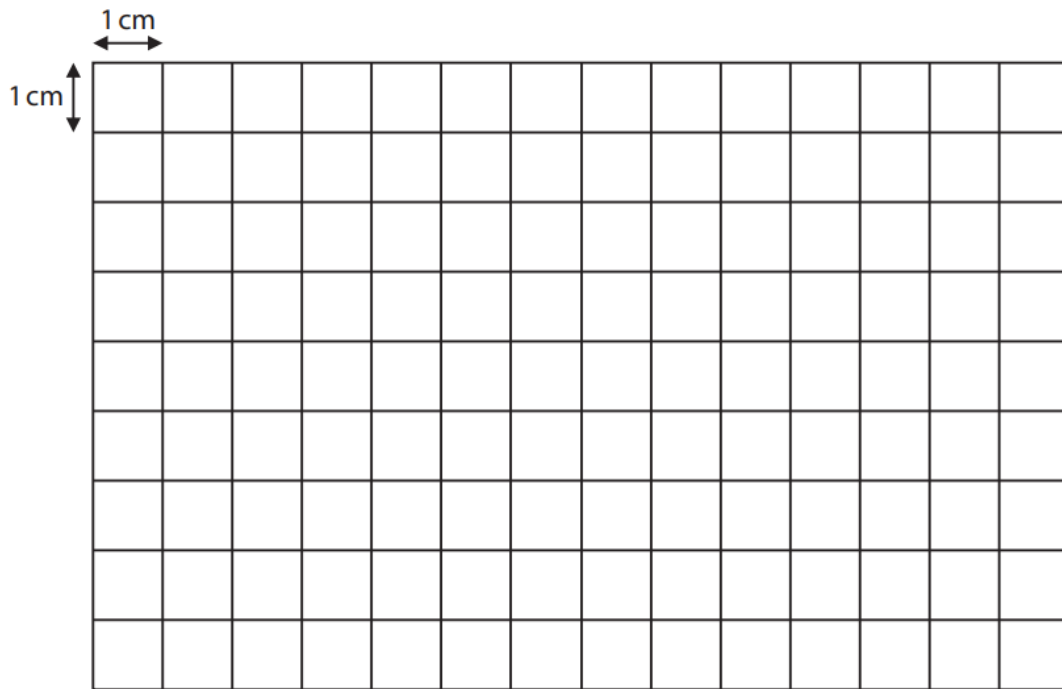
Chris is designing a badge.

The badge needs to

- be in the shape of a trapezium
- have a base of length 6 cm
- have only one line of symmetry.

Draw a suitable badge.
Use the grid below to draw a badge.

(3)



Level 1 Scale Exam Questions

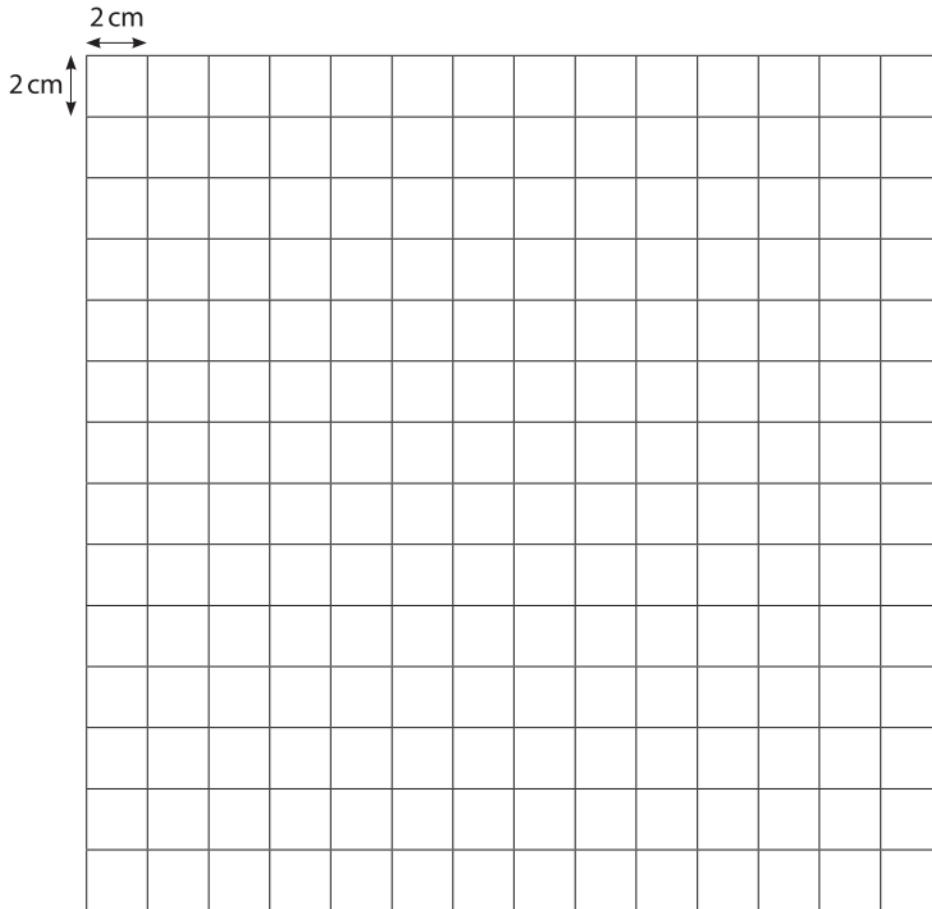
2.

Karen is making a birthday cake.

The top of the cake needs to be triangular with one side length 10 cm, one side length 12 cm and a 90° angle between these sides.

Draw the top of the cake for Karen.
Use the grid below to draw the top of the cake.

(3)



3.

Sam wants to create a space for water play in the village hall.

He has this diagram of the floor in the village hall.



The space for water play must be

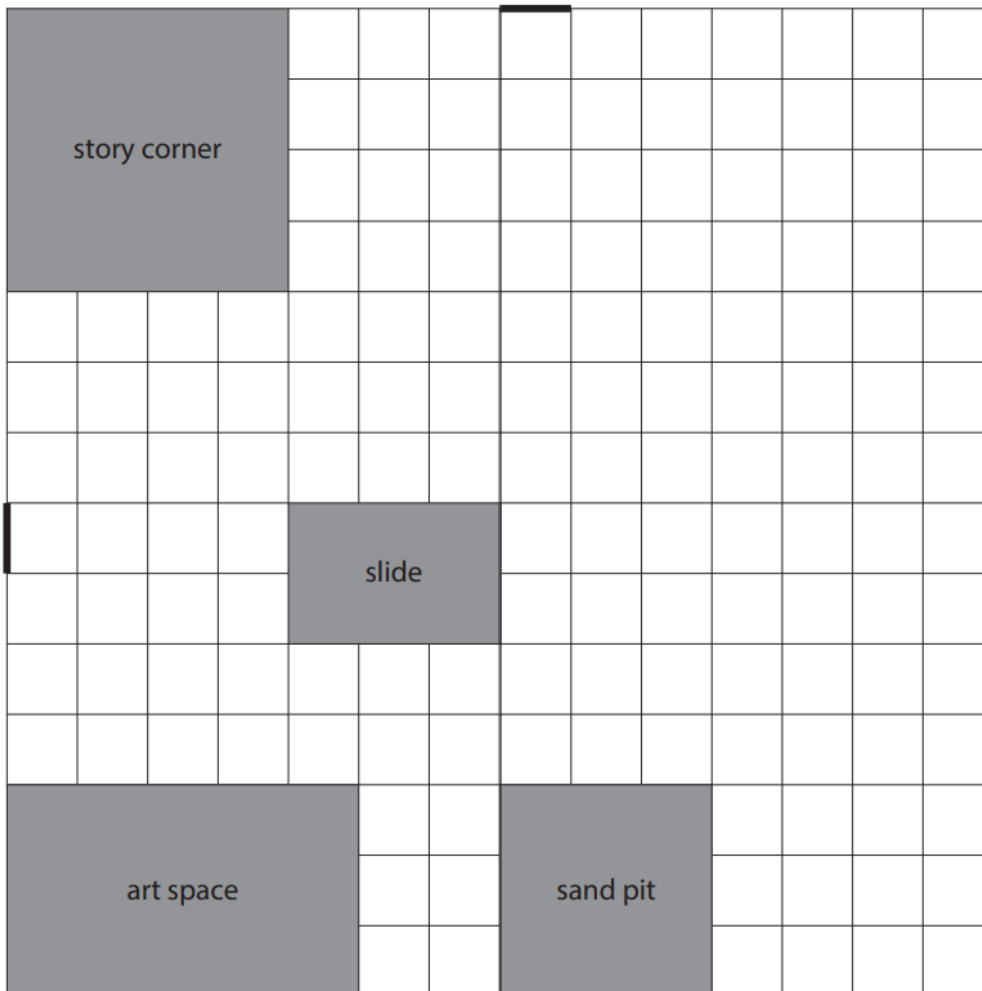
- in the shape of a rectangle 3.5 m by 4 m
- at least 2 m away from other activity spaces
- at least 3 m away from any door.

Draw a space for water play on the grid below.

(3)

Key 1 square length on the grid represents 1 m on the village hall floor

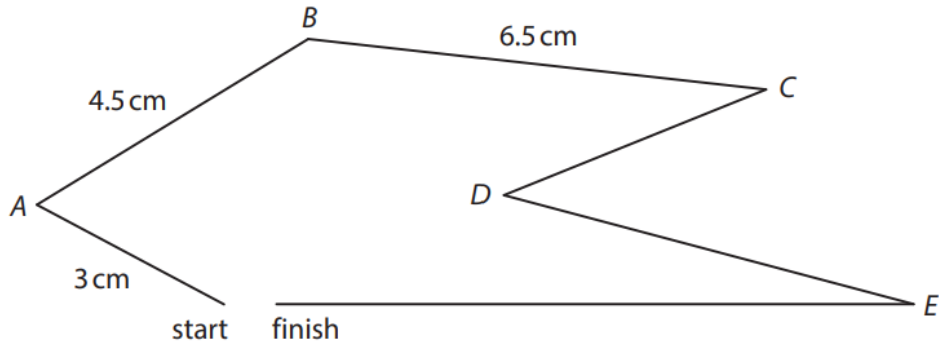
 activity space  door



4.

John is organising a charity sailing race on the sea.

He starts to draw this accurate scale map of the course.



Key 1 cm on the map is $\frac{1}{2}$ km on the sea

Sailors begin the race at the start and follow the course to the finish.

John says

“The course has a total distance of more than 18 km.”

- (a) Is John correct?
You **must** show your working.

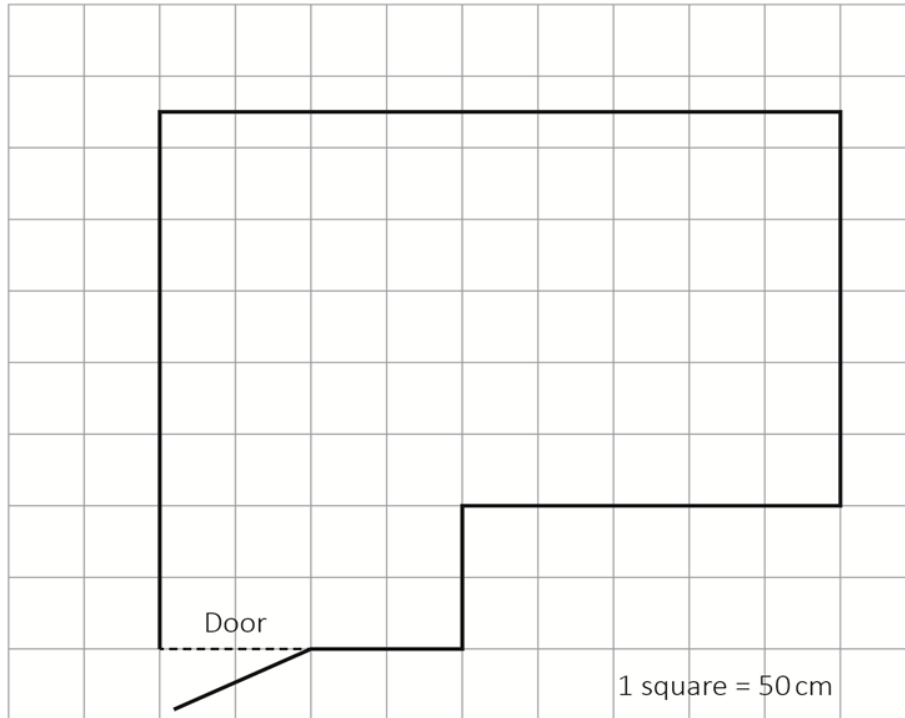
(4)

Level 1 Scale Exam Questions

NCFE

5.

Chester makes this scale plan of one of the rooms.



What is the actual length of the longest wall in m?

[2 marks]

Your answer:

m

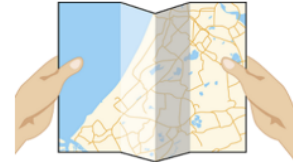
NCFE

6.a)

Asha plans to cycle from the Hook of Holland to Amsterdam.

Her map has a scale of 1 cm to 8 (kilometres) km

The straight line distance between the Hook of Holland and Amsterdam is 70 km



What is the measurement between these two places on Asha's map?
Give your answer in mm

[2 marks]

Your answer:

mm

b)

Asha will spend two days in Amsterdam and then cycle back to catch the ferry at the Hook of Holland.

The road distance between two places is about 40% longer than the straight line distance.

Estimate the actual road distance Asha will cycle **in total**.
Give your answer in km

[3 marks]

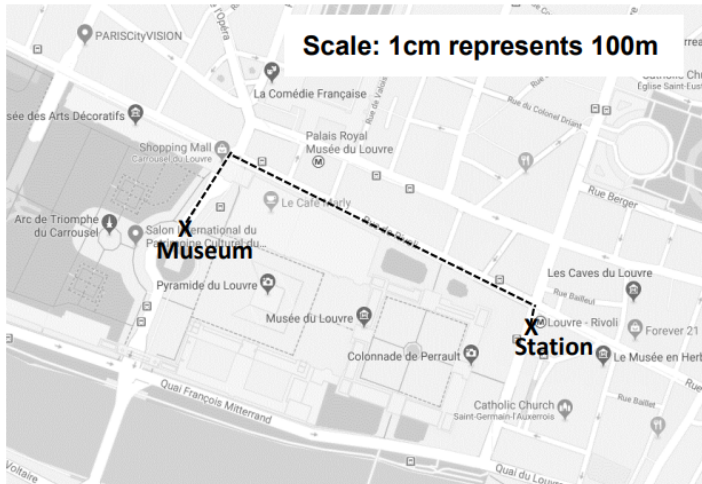
Sample	
Your answer:	km

Level 1 Scale Exam Questions

City & Guilds

7.

A tourist wants to know how long it will take to walk to a museum. This map shows the route from a nearby station to the museum.



The route measures 6.5cm on the map.

It takes the tourist 10 minutes to walk a kilometre.

How long will it take him to walk to the museum from the station?
Give units in your answer.

Show all your working.

Amount of time to walk

(4 marks)

8.

The owner of a trampoline park has a floor plan.

She wants to put 4 trampolines in **zone 3**.

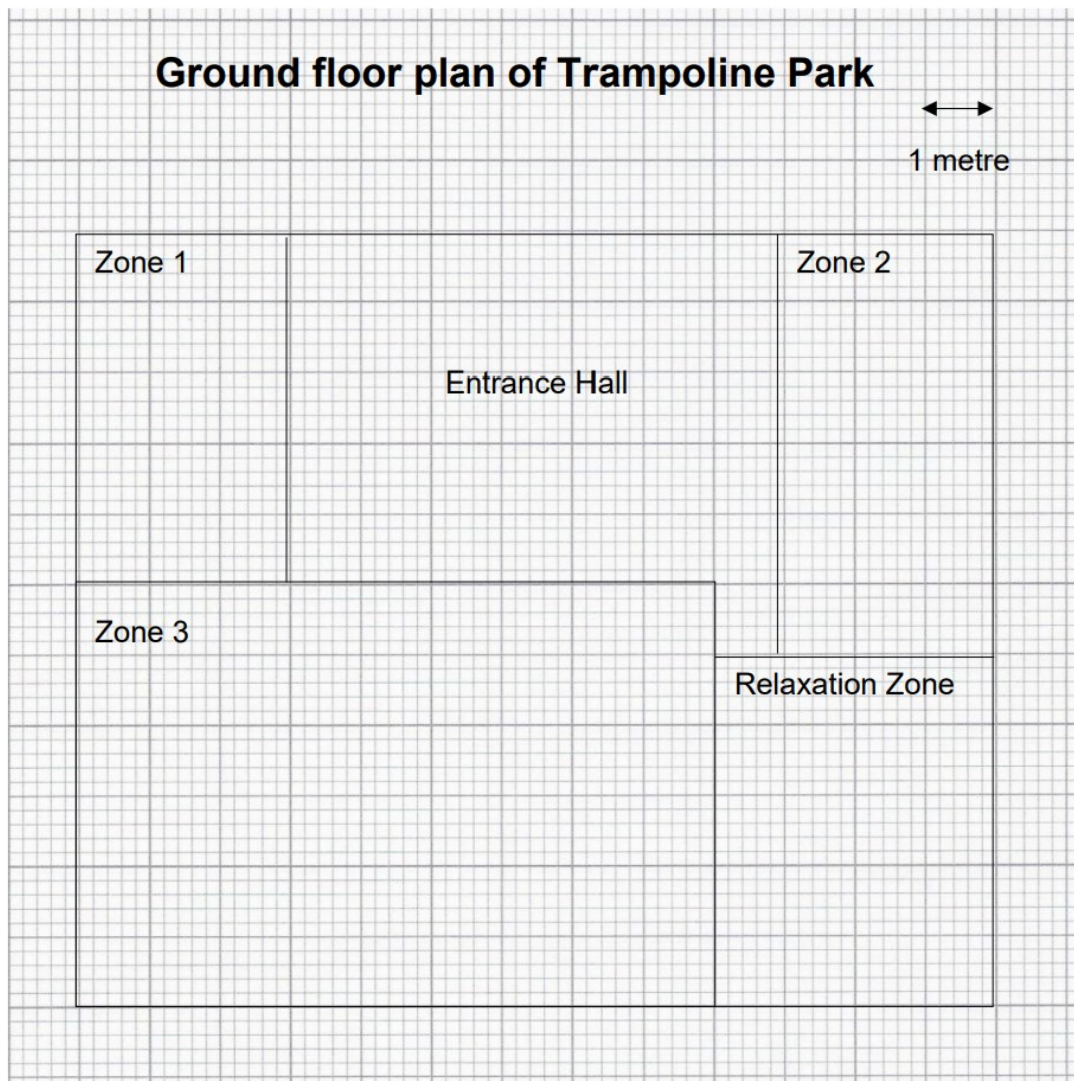
She needs a scale diagram to see where the trampolines will go.

Each trampoline measures 3 metres by 1.8 metres.

She wants them placed with 2 lines of symmetry in **zone 3**.

Complete the plan below to show the positions of the trampolines.

Draw the 2 lines of symmetry.



(6 marks)

Level 1 Scale Exam Questions

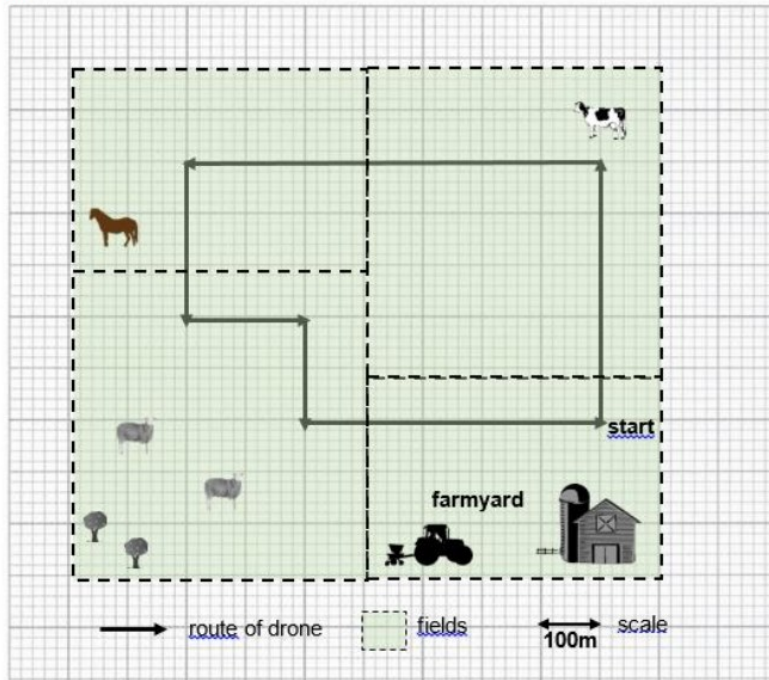
9.

A farmer uses a drone to monitor animals.

The drone can fly a distance of 8km when its battery is fully charged.

The drone has $\frac{1}{4}$ of its battery life left.

The farmer needs to know if the drone has enough battery to complete this route shown starting from his farmyard.



Does the drone have enough battery life to complete the route?
Explain your answer with figures.

Show your working

Does the drone have enough battery life to complete the route?

(tick one box) Yes No

Explanation

(4 marks)

Level 1 Scale Exam Questions

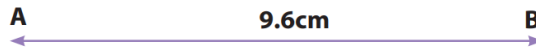
Highfield

10.

Using the scale, what is the distance between points A and B, in miles?

1 km = 0.62 miles

Scale
2cm:5km



Show your working out and write the answer in the box below.

(3 marks)

Answer: _____ miles

11.

You are using a map with the following information displayed:



2 inches = 10 miles

On the map, your home is 7 inches away from your workplace.

What is the actual distance between your home and your workplace?

Show your working out and write the answer in the box below.

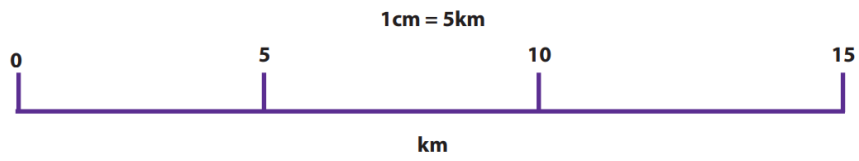
(2 marks)

Answer: _____ miles

Level 1 Scale Exam Questions

12.

You are using a map with the following information displayed:



On the map 2 cities are 25cm apart.

What is the actual distance between the 2 cities?

Show your working out and write the answer in the box below.

(2 marks)

Answer: _____ **km**

Level 1 Scale Exam Questions

13.

Two houses are 160m apart.

They are drawn on a map with a scale of 1:1000

How far apart are they on the map in cm?

Show your working out and write the answer in the box below.

(2 marks)

Answer: _____ cm

AQA

14.

Anya is organising an outdoor concert.

Anya is planning where to put refreshment stalls.

There will be

3 rectangular food stalls, each measuring 6 m by 2 m

2 square food stalls, each measuring 4 m by 4 m

1 rectangular drinks stall measuring 6 m by 3 m

There must be at least 2 m of space between stalls.

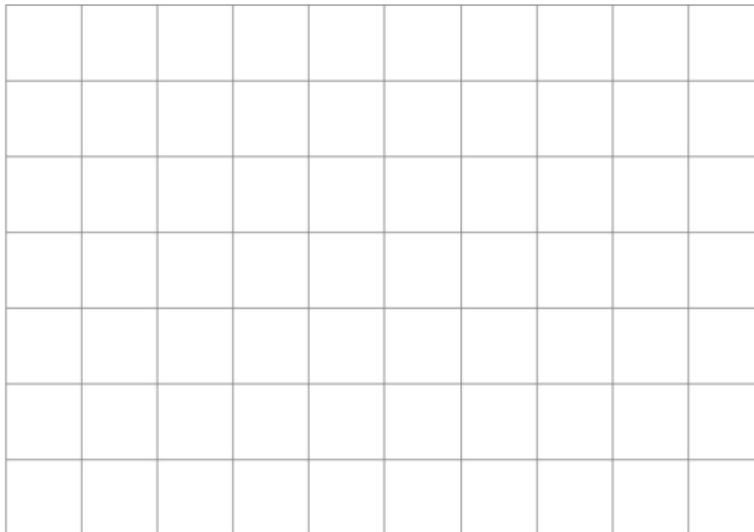
The centimetre grid represents a scale drawing of the area she can use.

On the grid, 1 cm represents 2 m

Draw a possible plan for the stalls on the centimetre grid.

[4 marks]

Scale: 1 cm represents 2 m



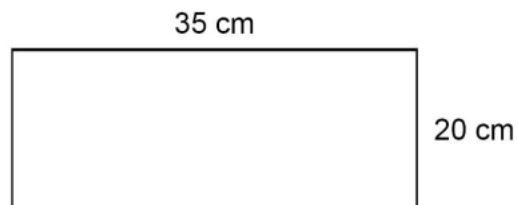
15.

Jon makes handbags to sell online.



Jon wants to make 50 handbags.

For each handbag Jon needs a rectangle of leather measuring 35 cm by 20 cm



He cuts the rectangles from sheets of leather measuring 120 cm by 100 cm

The grid on the opposite page is a scale drawing of a sheet of leather.

Jon says,

"I need 4 sheets of leather to make 50 handbags."

Is he correct?

You may use the grid to help you.

You **must** show your working.

[5 marks]

Level 1 Scale Exam Questions

Scale: 1 cm represents 10 cm