

TQUK Functional Skills Qualification in Maths at Level 2

Examination Past Paper 5

Please complete the details below using black or blue ink. Use **BLOCK CAPITALS**.

Learner Name: _____

Learner Number: _____

Date: _____

Centre Name: _____

Instructions:

- read each question **carefully**
- answer **all** questions
- write your answers **clearly** in the spaces provided
- **check** your answers.

Information:

- this examination has **two** sections. These are clearly labelled
- you are **not allowed** to use a calculator for Section A
- you **are allowed** to use a calculator for Section B
- the **maximum** mark for this examination is 60
- the marks available for each question are shown in **bold** beneath each question.

Items:

- you **will need** a pen with black or blue ink, a pencil, a ruler and an eraser (for diagrams, graphs and charts only)
- you **will need** a basic calculator for Section B only
- you **will need** a protractor
- you **will not** need any other stationery or equipment.

Time allowed:

30 minutes for Section A (Non-calculator)

90 minutes for Section B (Calculator)

Do not open this examination paper until you are told to do so.

For examiner use only

	Marks available	Marks awarded	Second marks
Section A	15		
Section B	45		
Total marks	60		

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Section A: Non-calculator

There are **15 marks** available in this section.
You must **not** use a calculator in this section.
You will have **30 minutes** to complete this section.



1. Work out $9.486 - 0.52$

Answer	

[1]

2. Work out 4×2.125

Answer	

[1]

Questions continue on the following page

3. Work out:

$$8\frac{1}{4} + 2\frac{1}{5}$$

Give your answer as a mixed number.

Answer	
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[2]

4. Work out $100 + 5^2 \times 2$

Answer	
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[2]

5. Dale is an estate agent and sells two properties.

These are the sale prices:

House A:	£825 750
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House B:	£390 595
-----------------	----------

Dale thinks that the total sale price for both properties is more than £1 215 000

Is Dale correct?

Show how you decide.

Answer	

[2]

Questions continue on the following page

6. A concrete block has:

- mass = 4800 grams
- volume = 2000 cm³

Work out the density of the concrete block.

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Answer	
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[2]

7. The distance between Taylor's house and Kai's house on a map is 8 centimetres (cm).

The scale on the map is 1 : 50 000

Work out the actual distance between the two houses.

Give your answer in kilometres (km).

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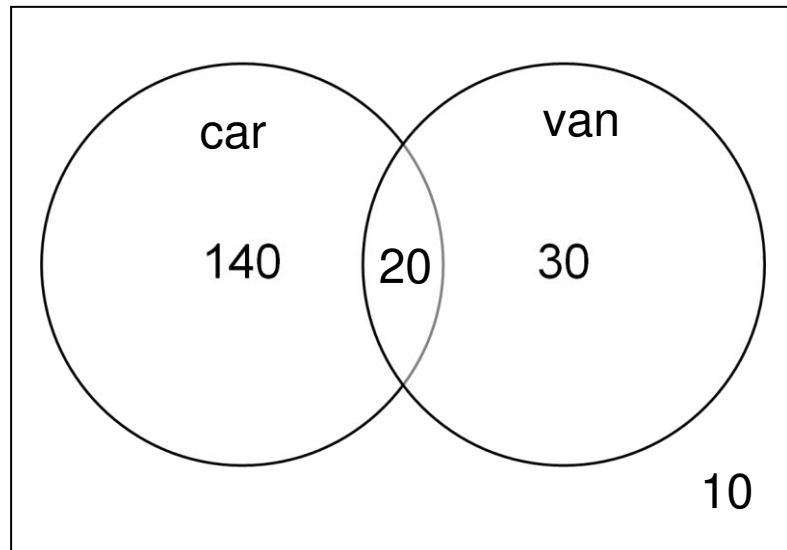
Answer	
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km

[2]

8. Lei asks a group of people whether they own a car or a van.

The results are shown in this Venn diagram:



One of these people is chosen at random.

What is the probability that the person chosen does **not** own a car or a van?

Give your answer as a decimal **and** a percentage.

Answer	a) Decimal:	b) Percentage:

[3]

End of Section A.

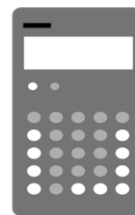
Section B begins on Page 7.

Section B: Calculator

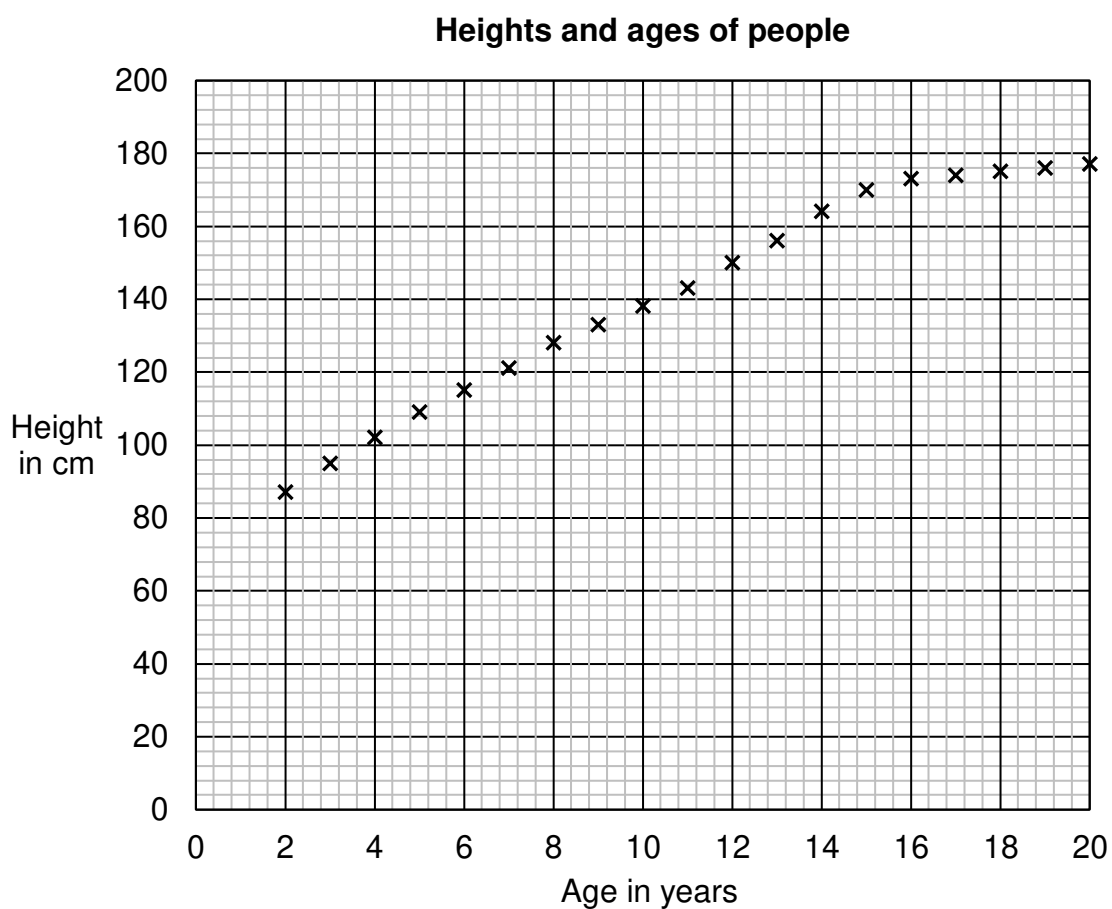
There are **45 marks** available in this section.

You **can** use a basic calculator in this section.

You will have **90 minutes** to complete this section.



1. What type of correlation does the scatter graph show?



a) Positive correlation	b) Negative correlation
c) No correlation	d) Weak correlation

Answer

[1]

Questions continue on the following page

2. Write down the mode of these numbers:

1000 2000 1200 1500 1200 1400 1375

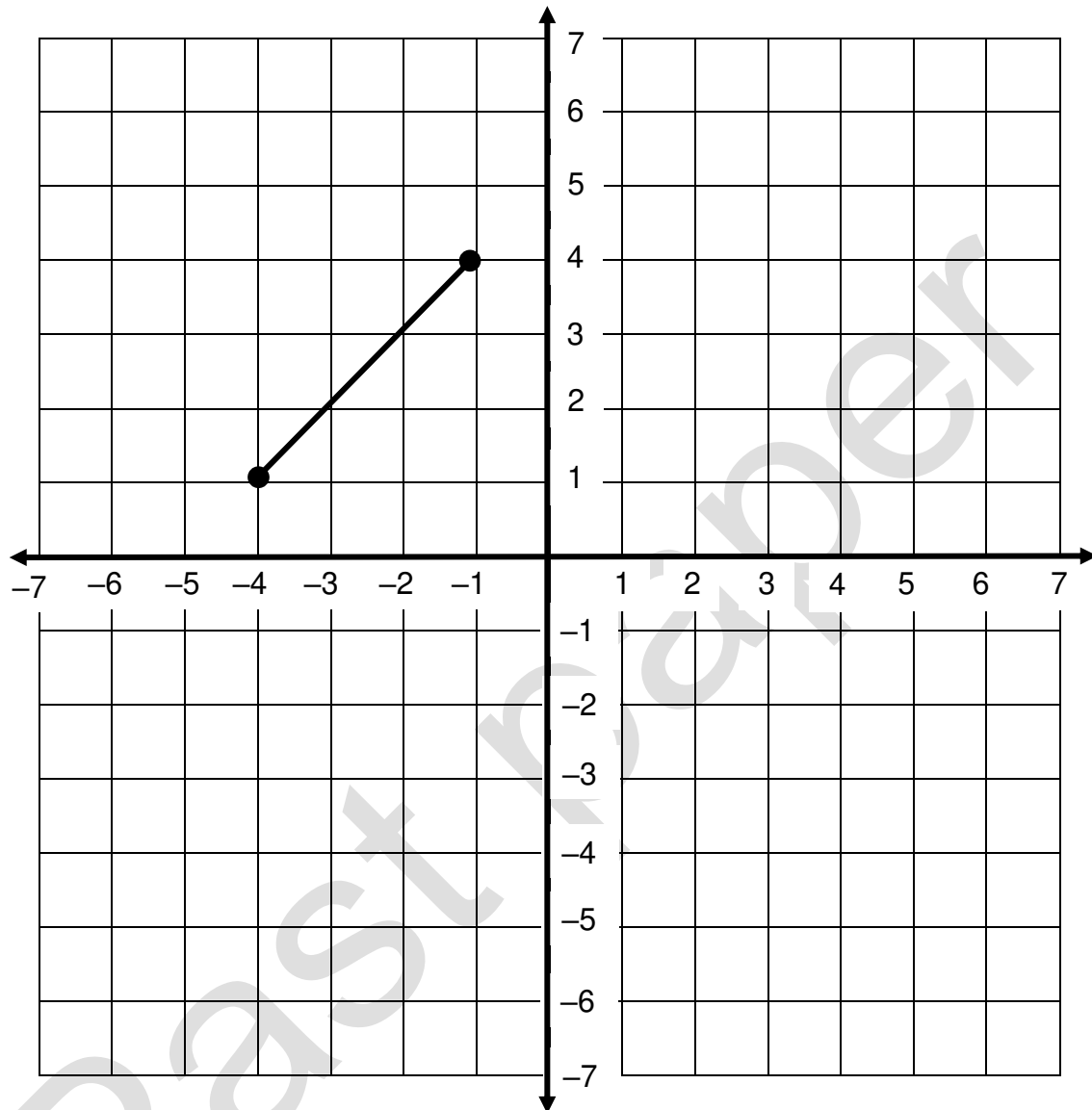
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Answer	
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[1]

3. Riley wants to put a square vegetable patch in a garden.

One side of the vegetable patch is shown on the grid below:



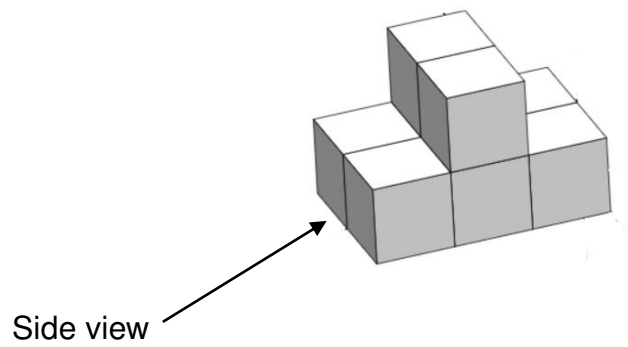
Write down possible coordinates for the other **two** corners of the square.

Answer
(,) and (,)

[2]

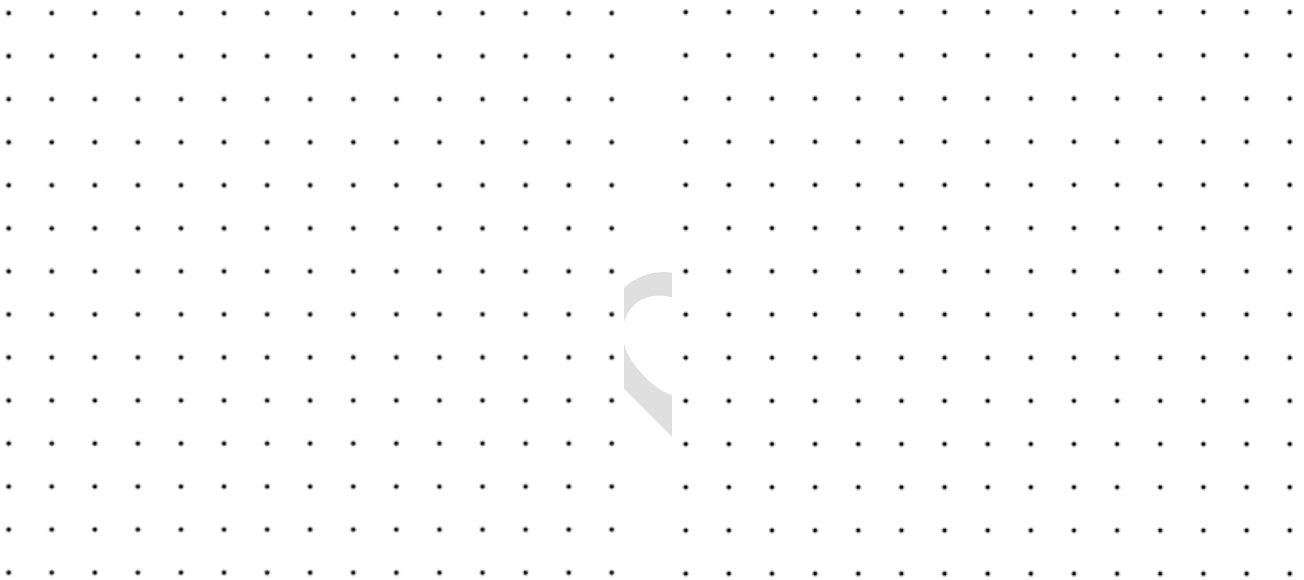
Questions continue on the following page

4. Draw the plan view and side view of the shape:



Plan view

Side view



[2]

5. Write:

$$\frac{1}{16}$$

- a) as a decimal
b) as a percentage.

Answer	a) Decimal:	b) Percentage:

[2]

6. Jessie reads reviews for a film online.

210 of the reviewers would recommend the film.

30 of the reviewers would **not** recommend the film.

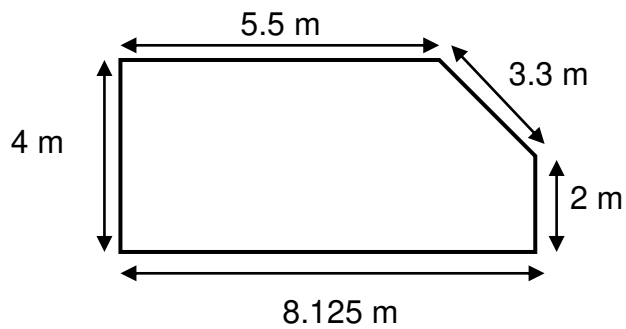
What percentage of the total number of reviewers would recommend the film?

Answer	%

[2]

Questions continue on the following page

7. Sam needs to put a fence around the garden shown below:



Not drawn to scale

Fence panels are 2.6 metres wide.

The fence panels can be cut to size after Sam buys them.

How many fence panels does Sam need to buy?

Area for working out the answer.

Answer

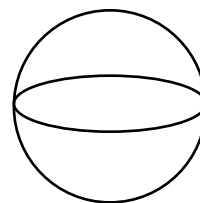
panels

[3]

8. Stevie needs to estimate the surface area of a sphere.

Stevie knows:

- the radius of the sphere is 8 cm
- $\pi = 3.14159$



Stevie rounds π to the nearest whole number to **estimate** the surface area of the sphere.

What answer should Stevie get?

Use:

$$A = 4\pi r^2$$

Where:

A = surface area of sphere

r = radius of sphere

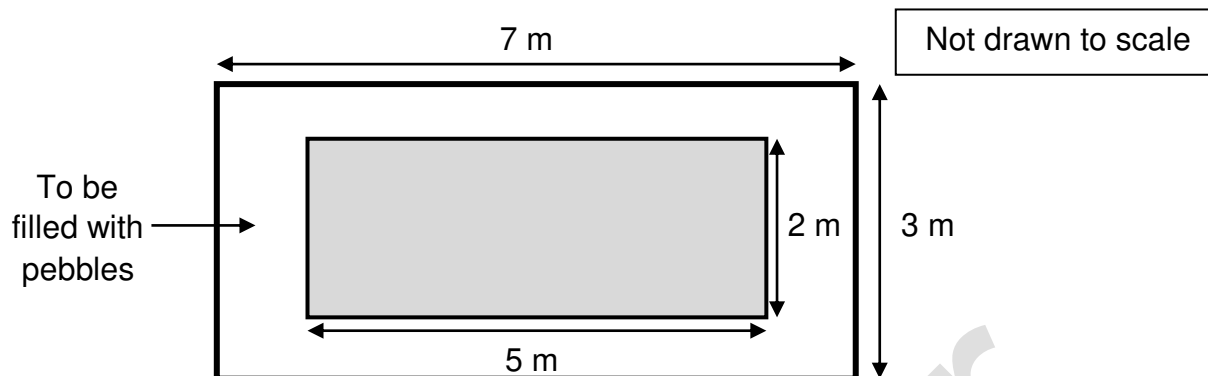
Show your working.

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p style="margin: 0;">Answer</p> </div> <div style="text-align: right; margin: 0;"> <p>cm²</p> </div> </div>	
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[3]

Questions continue on the following page

9. Parker wants to fill the path around a fishpond with grey and white pebbles to a depth of 0.06 metres (m).



Parker uses this formula to estimate the total amount of pebbles needed:

(Area of larger rectangle – area of smaller rectangle) multiplied by depth of pebbles

Parker reduces the total amount by 38% to estimate the amount of white pebbles required.

What answer should Parker get?

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p>Answer</p> </div> <div> <p>m³</p> </div> </div>

[3]

10. Hayden cycles 15 miles in 50 minutes.

Hayden thinks it is more than 17 miles per hour (mph).

Is Hayden correct?

Show how you decide.

<div>Answer</div> <div>mph</div>	
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[3]

Questions continue on the following page

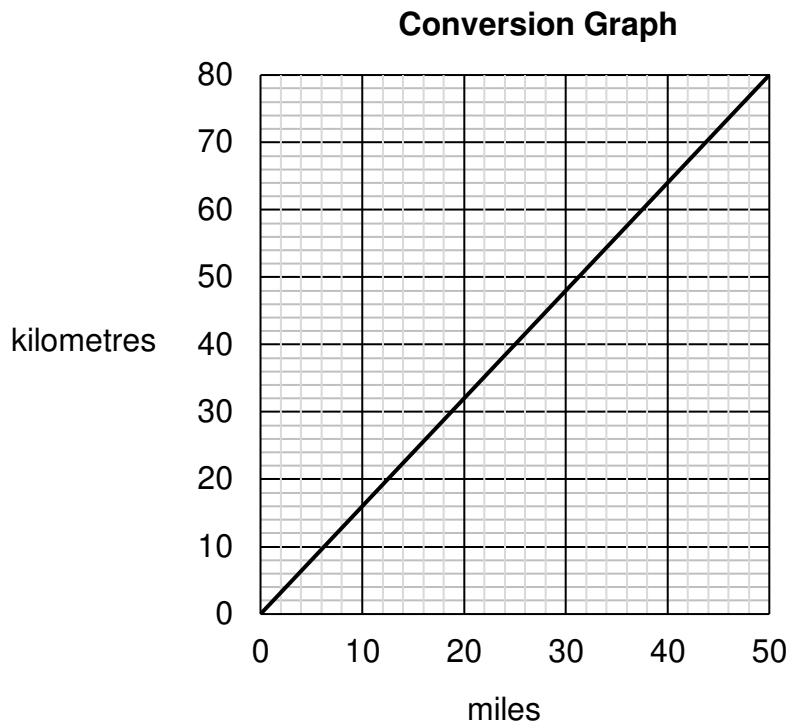
11. Kass is planning a road trip.

The total distance is 4000 kilometres (km).

Kass only wants to drive a maximum of 180 miles each day.

How many whole days will Kass need to complete the 4000 km?

Use this graph to convert between kilometres and miles.



Answer

days

[4]

12. Jude needs to order 200 sandwiches for a party.

Jude has these instructions:

- order cheese, ham and chicken sandwiches in the ratio 5 : 2 : 1

Complete the shopping list for Jude.

Shopping list	
Type of sandwich	Number of sandwiches to order
Cheese	
Ham	
Chicken	
Total	

[4]

Questions continue on the following page

13. Nia and Charlie are both taxi drivers.

The table shows how far each drove last week:

	Monday	Tuesday	Wednesday	Thursday	Friday
Nia	140 miles	86 miles	138 miles	110 miles	96 miles
Charlie	76 miles	120 miles	124 miles	60 miles	130 miles

Their manager thinks that, on average, Nia drove further each day than Charlie.

Charlie disagrees.

Show that **both** could be correct.

Show your working.

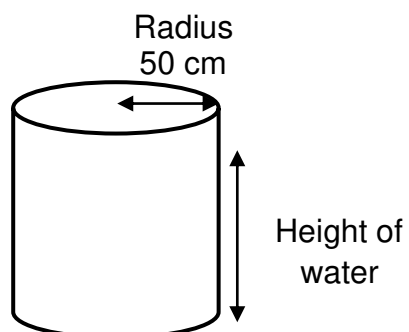
Past paper

	Answer
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[4]

14. Harper works at an aquarium.

Harper needs to fill this cylindrical fish tank until it is 72% full.



Not drawn to scale

Harper knows that the tank will hold 981 250 cubic centimetres (cm^3) of water when it is full.

To what height does Harper need to fill the tank?

Use $\pi = 3.14$

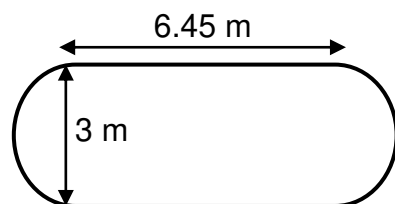
Answer

cm

[5]

Questions continue on the following page

15. Dylan wants to estimate how much it will cost to carpet a section of floor.
The section of floor is made up of a rectangle with a semi-circle on each end.



Not drawn to scale

Dylan finds these carpets for sale:

Carpet	A	B	C	D	E
Price per square metre (m^2)	£22.50	£15.75	£18.00	£24.95	£15.75

Dylan uses the modal price to estimate how much the total cost will be.

How much does Dylan estimate it will cost to carpet the section of floor?

Give your answer to the nearest pound (£).

Use $\pi = 3.14$

Answer box is on the following page

[6]

This is the end of the assessment.