Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel Functional Skills

Centre Number	Candidate Number

Past Paper 2

Time: 25 minutes | Paper Reference **PMAT2/N02**

Mathematics

Level 2
Section A (Non-Calculator)

You must have:
Pen, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses. Tracing paper may be used.

Total Marks

My signature confirms that I will not discuss the content of the test with anyone.

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** questions.
- Write your final answers in the boxes provided.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You **must** show clearly how you get your answers in the spaces provided. Marks will be awarded for your working out.
- Check your working and your answers at each stage.
- Diagrams are **not** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**
- Take the value of π to be 3.14

Information

- The total mark for this section is 16.
- The marks for each question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- This sign ☑ shows where marks will be awarded for showing your checks.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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Pearson

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SECTION A

Answer ALL questions. Write your answers in the spaces provided.

1 Here are the times, in seconds, five athletes took to finish a 100 m race.

11.05 10.94 11.12 10.91 11.12

(a) Find the median.

(2)

seconds

(b) Find the mode.

(1)

seconds

(Total for Question 1 is 3 marks)

2 Here is a formula

$$h = \sqrt{(a^2 - b^2)}$$

Find the value of h when

$a = 10$ and $b = 8$

(3)

(Total for Question 2 is 3 marks)

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3 Alex is the manager of a hospital canteen.
He reviews the meals the patients choose.

On Monday there were 240 patients in total.

$\frac{1}{3}$ of these patients chose pasta.

$\frac{3}{8}$ of these patients chose beef stew.

The other patients chose chicken.

How many patients chose chicken on Monday?

(4)

(Total for Question 3 is 4 marks)

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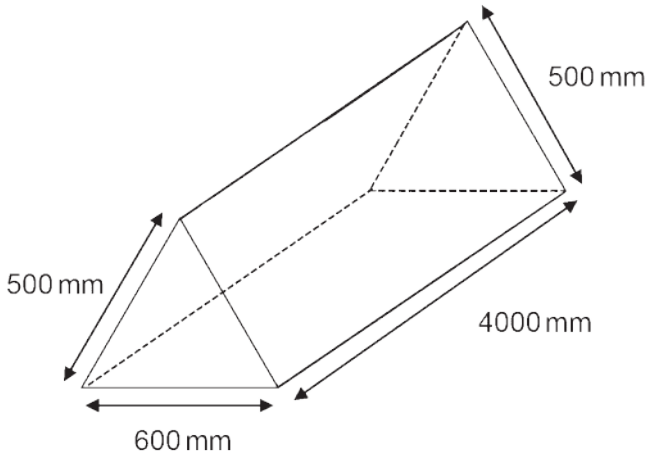
4 Roberto paints advertising boards.
Each board is in the shape of a triangular prism.



1 litre of paint covers 10 m^2
Roberto has 2 litres of paint.

Roberto has 3 advertising boards to cover with paint.
He needs to cover all five faces of the triangular prism with paint.

The area of each triangular face is 0.12 m^2

Will 2 litres of paint be enough to cover the 3 advertising boards?
You **must** show all your working.

(6)

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(Total for Question 4 is 6 marks)

TOTAL FOR SECTION A IS 16 MARKS

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel Functional Skills

Centre Number	Candidate Number

Past Paper 2

Time: 1 hour 30 minutes | Paper Reference **PMAT2/C02**

Mathematics

Level 2
Section B (Calculator)

You must have:
Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses. Tracing paper may be used.

Total Marks

My signature confirms that I will not discuss the content of the test with anyone.

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** questions.
- Write your final answers in the boxes provided.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You **must** show clearly how you get your answers in the spaces provided. Marks will be awarded for your working out.
- Check your working and your answers at each stage.
- Diagrams are **not** accurately drawn, unless otherwise indicated.
- **Calculators may be used.**
- If your calculator does not have a π button take the value of π to be 3.14

Information

- The total mark for this section is 48.
- The total mark for this paper is 64.
- The marks for each question are shown in brackets
  – use this as a guide as to how much time to spend on each question.
- This sign ☑ shows where marks will be awarded for showing your checks.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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SECTION B

Answer ALL questions. Write your answers in the spaces provided.

1 Karen needs to buy a new fridge.
The fridge must fit in a space in the kitchen.

The space has width 19 inches, depth 22 inches and height 36 inches.

Karen sees these fridges for sale.

fridge	width in cm	depth in cm	height in cm
A	47.2	44.6	84.2
B	49.4	44.6	83.9
C	46.5	44.6	94.2

1 inch = 2.54 cm

Karen will buy one of these fridges.

Choose a suitable fridge for Karen to buy.
You **must** show your working.

(3)

(Total for Question 1 is 3 marks)

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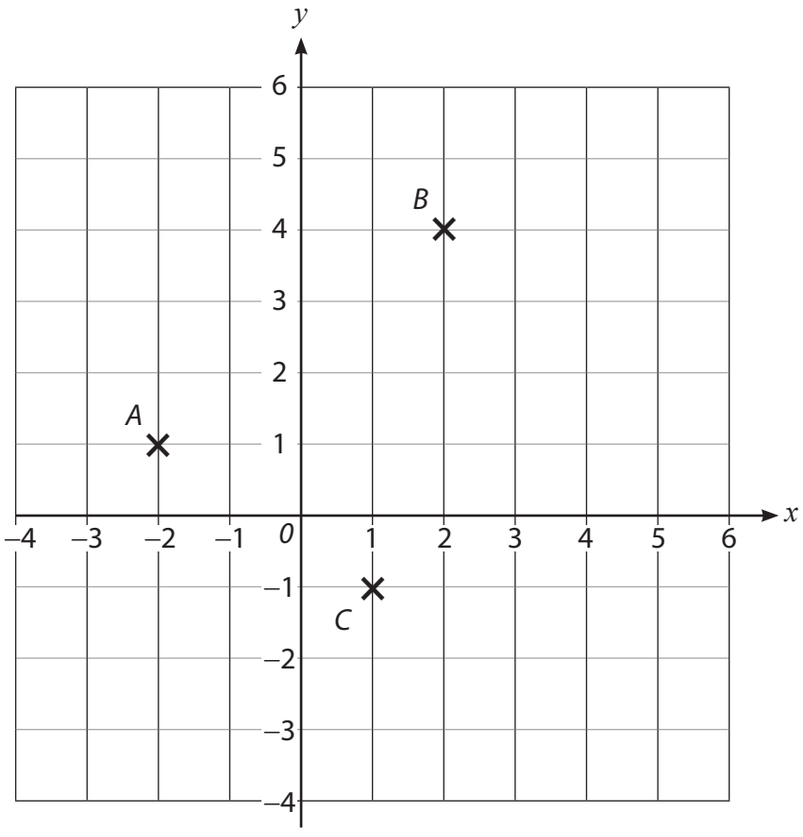

(a) Write down the coordinates of point *C*.

(1)

(b) Mark with a cross the point *D* on the grid so that *ABCD* is a parallelogram.

(1)

(c) Write down the sum of the angles in a parallelogram.

(1)

°

(Total for Question 2 is 3 marks)

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3 Carla is the director of a building company.
She employs builders at a site in Hull and at a site in London.

The average day rate of her builders in London is £153

In Hull the day rates she pays her builders are shown in this table

builder	**A**	**B**	**C**	**D**	**E**	**F**	**G**
day rate (£)	290	75	115	84	120	89	298

The builders in Hull say their average day rate is less than £153

Carla says the average day rate is the same in Hull and in London.

Show how both these statements can be true.
You **must** show your working.

(4)

(Total for Question 3 is 4 marks)

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4 Last year 123 students left a college with a pass in English.

This year 27 more students than last year left the college with a pass in English.

The college says

'The number of students leaving college with a pass in English has increased by 24% from last year.'

(a) Is the college correct?
Show why you think this.

(2)

(b) Use a reverse calculation to show a check of your answer.

(1)

(Total for Question 4 is 3 marks)

5 Tim did a survey at a large shopping centre.
He asked 400 visitors to the centre to choose the main reason for their visit.

The reasons were shops, free parking, food court and location.

(a) Complete the two-way table.

(3)

	shops	**free parking**	**food court**	**location**	**total**
male			40	21	
female		38		23	227
total	198	62			400

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From the people taking part in the survey, one person is chosen at random to get a prize.

(b) Find the probability a female who chose location gets the prize.

(2)

$\frac{\square}{\square}$

(Total for Question 5 is 5 marks)

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6 Wahab sells cars.

The table shows information about the number of cars he sold each week for the last 26 weeks.

number of cars sold each week	frequency		
1–5	2		
6–10	12		
11–15	9		
16–20	3		

Wahab estimates he sold a mean average of 10 cars per week.

Is this estimate of the mean correct?
Show why you think this.

(3)

(Total for Question 6 is 3 marks)

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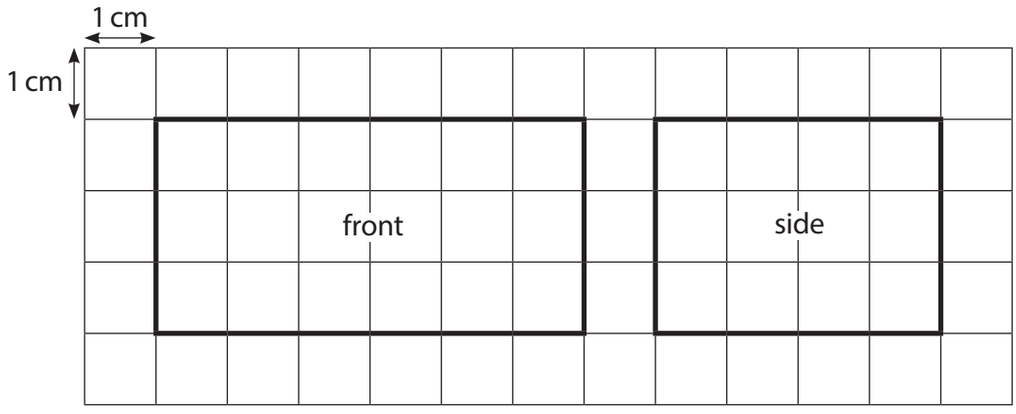
7 The front elevation and the side elevation of a cuboid are drawn on the grid below.



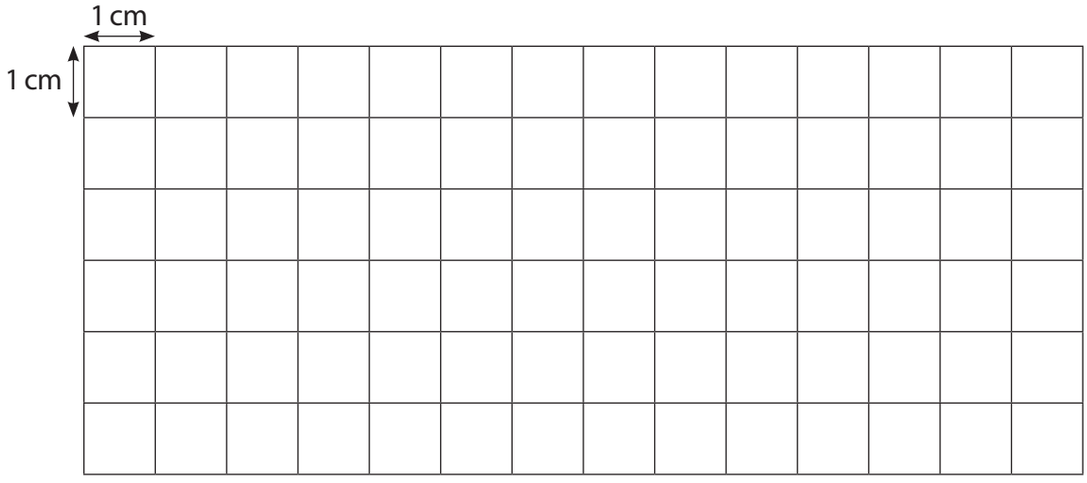
(a) Find the volume of the cuboid.

(2)

cm^3

(b) Draw the plan of the cuboid on the grid below.

(2)



(Total for Question 7 is 4 marks)

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8 Mina runs a football club.
She needs to order size 3, size 4 and size 5 footballs in the ratio 6 : 2 : 1

Mina needs to order a total of 180 footballs.

(a) Complete the order form for Mina.

(3)

order form	
size of football	**number**
3	
4	
5	

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Mina also needs to buy medical equipment.

She needs 23 packets of plasters.

One packet costs £4.49

A box of 5 packets costs £20.25

(b) Can Mina buy 23 packets of plasters for less than £100?
Show why you think this.

(3)

(Total for Question 8 is 6 marks)

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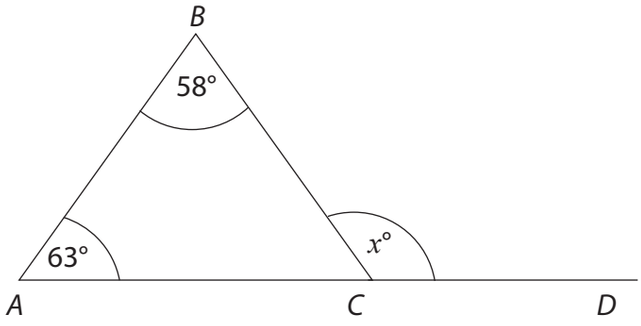
9 *ABC* is a triangle.
ACD is a straight line.



(a) Work out the value of x.

(2)

°

(b) Use estimation to check your answer.

(1)

(Total for Question 9 is 3 marks)

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10 There are roadworks on a motorway.
The average speed limit is 50 mph.

A car travels a distance of 18 miles in 24 minutes.

Is the average speed of the car less than 50 mph?
Show why you think this.

(3)

(Total for Question 10 is 3 marks)

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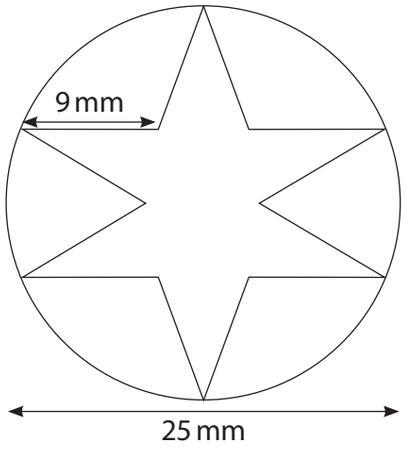
11 Mario uses wire to make earrings.

Mario uses wire to make a circle with diameter 25 mm.
He then adds a star shape made from wire.
All the sides of the star shape have length 9 mm.



Mario has 3 rolls of wire.
There are 500 mm of wire on each roll.

Mario is going to make 8 of these earrings.

Will Mario have enough wire to make 8 of these earrings?

(5)

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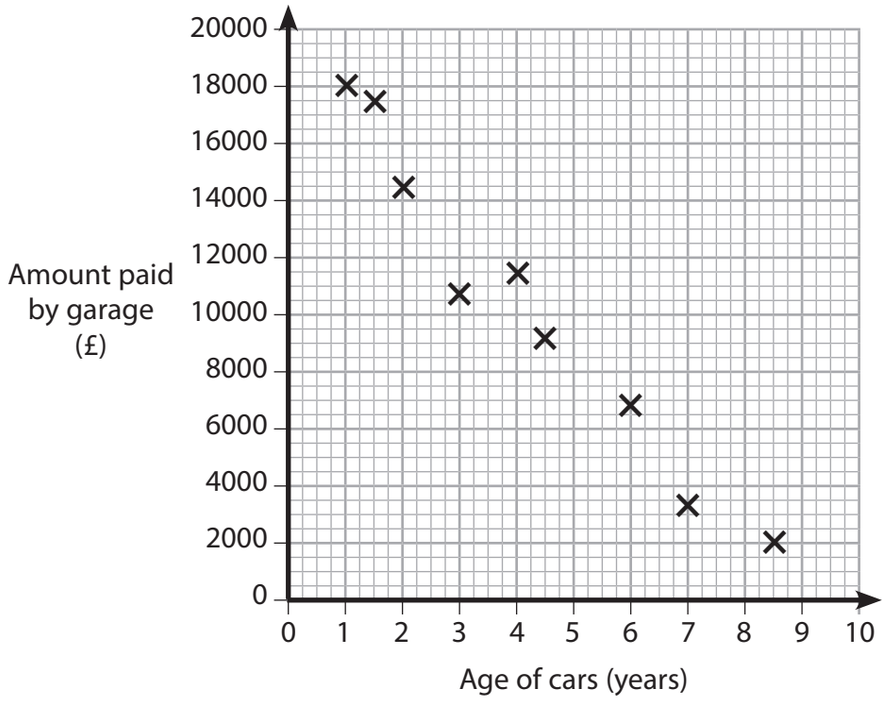
(Total for Question 11 is 5 marks)

12 Daniel has a blog about how garages buy and sell cars.

The scatter diagram gives information about the amount garages pay for one type of car depending on its age.



Daniel is going to use the scatter diagram to estimate the monthly payments for a car the garage is going to sell.

Daniel knows garages sell cars for 34% more than they paid.

The car is 5 years old and there are 24 equal monthly payments.

Work out the cost of one monthly payment.

(6)

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(Total for Question 12 is 6 marks)

TOTAL FOR SECTION B IS 48 MARKS
TOTAL FOR PAPER IS 64 MARKS

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