

Write your name and the date clearly.

Name

Date

Teach Me Maths

GCSE (9–1) Mathematics

For Pearson Edexcel GCSE Mathematics (1MA1)

Mock Set B

Time: 1 hour 30 minutes

Mathematics

PAPER 2 (Calculator)

Foundation Tier

You must have: a ruler marked in centimetres and millimetres, a protractor, a pair of compasses, a pen, an HB or B pencil, an eraser, a calculator and the Formulae Sheet (last page). You may use tracing paper.

Total Marks

out of 80

Instructions

- Use **black** ink or a ball-point pen.
- If you use a pencil for diagrams, sketches or graphs, it must be dark (HB or B).
- **Write your name and the date** in the box at the top of this page.
- Answer **all** questions.
- Write your answers in the spaces provided – you may not need all the space.
- You must **show all your working**.
- Diagrams are **NOT** drawn accurately, unless the question says they are.
- You may use a calculator.
- If your calculator does not have a π button, use 3.142 for π unless the question says otherwise.

Information

- This paper is out of 80 marks.
- The marks for **each** question are shown in brackets – use them to judge how long to spend on each question.

Advice

- Read each question carefully before you start your answer.
- Try to answer every question.
- If you have time at the end, check your answers.

Practice paper written by Teach Me Maths in the style of Pearson Edexcel GCSE Mathematics (1MA1). Not an official Pearson Edexcel paper.

Turn over ►

Answer **ALL** questions. Write your answers in the spaces provided.
You must write down all the stages in your working.

1 Here are four numbers.

4.38 4.083 4.8 4.308

Write these numbers in order of size.

Start with the smallest number.

.....
(1)

(Total for Question 1 is 1 mark)

2 Change 8000 millilitres into litres.

..... litres
(1)

(Total for Question 2 is 1 mark)

3 Write 7465 correct to the nearest 10

.....
(1)

(Total for Question 3 is 1 mark)

4 Simplify $8 \times 3k$

.....
(1)

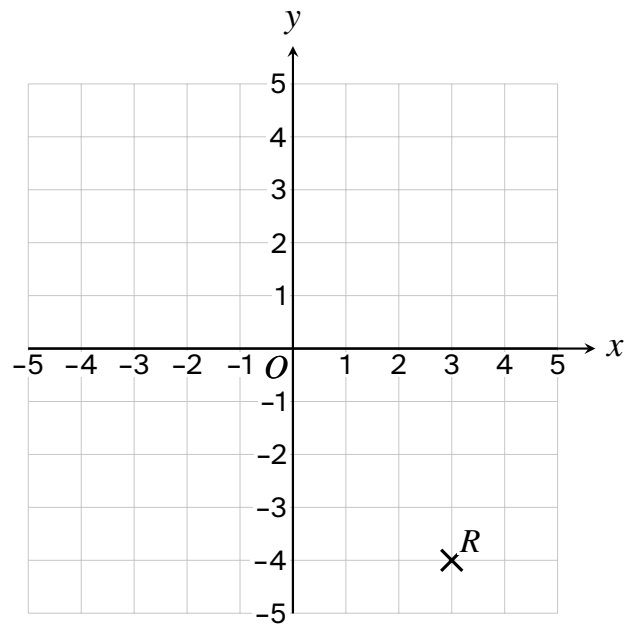
(Total for Question 4 is 1 mark)

5 Work out the number that is halfway between -9 and 15

.....
(1)

(Total for Question 5 is 1 mark)

- 6 The point R is shown on the grid.



- (a) Write down the coordinates of the point R .

(..... ,)
(1)

- (b) On the grid, draw the line $x = -2$

(1)

(Total for Question 6 is 2 marks)

7 Jon is going to make a smoothie.

He will choose **two different** fruits from this list.

banana (B) kiwi (K) pineapple (P) strawberry (S)

List all the possible pairs of fruits Jon can choose.

(2)

(Total for Question 7 is 2 marks)

8 Jude is a care worker.

She uses her own car to visit people at their homes.

She works from Monday to Friday.

The mileage shown in her car on Monday morning and on Friday evening of one week is given below.

Monday morning

3	6	4	1	8
---	---	---	---	---

 miles

Friday evening

3	6	7	0	3
---	---	---	---	---

 miles

During the week, Jude drove 27 miles that were **not** for work.

Jude is paid 45p for each mile she drives for work.

She is also paid £3.20 for parking on each of the 5 days she works.

How much money should Jude claim for her mileage and parking this week?

Give your answer in pounds.

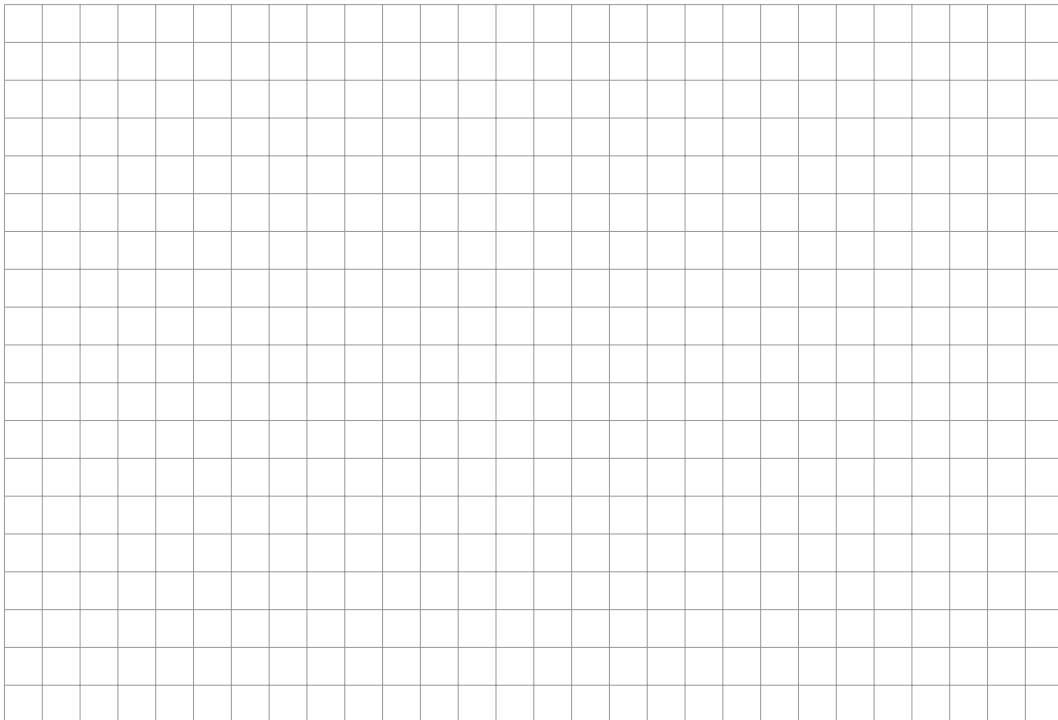
£
(4)

(Total for Question 8 is 4 marks)

- 9 Max records the number of emails he gets each weekday for one week.
The table shows information about his results.

Day	Number of emails
Monday	18
Tuesday	25
Wednesday	12
Thursday	21
Friday	9

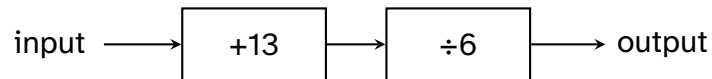
On the grid, draw a suitable bar chart to show this information.



(3)

(Total for Question 9 is 3 marks)

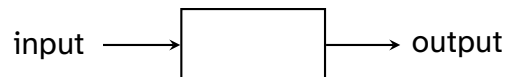
- 10 (a) Here is a number machine.



Work out the output when the input is 29

.....
(1)

- (b) Here is a different number machine.
The operation in the box is missing.



When the input is 6, the output is 30

Write down two different operations that could go in the box.

operation 1

operation 2

(2)

(Total for Question 10 is 3 marks)

- 11** 150 students in Year 9 and Year 10 each choose one after-school club.
They choose art or drama or sport.

72 of the students are in Year 10.

41 students choose sport.

19 of the students who choose sport are in Year 9.

23 Year 10 students choose art.

56 students choose drama.

How many Year 9 students choose drama?

You may use the two-way table to help you.

	Art	Drama	Sport	Total
Year 9				
Year 10				
Total				

.....
(3)

(Total for Question 11 is 3 marks)

12 A sports hall is a rectangle.

The hall is 36 m long and 22 m wide.

Rhys wants to make a scale drawing of the sports hall on a sheet of paper.

The paper is a rectangle 29.7 cm long and 21 cm wide.

He uses a scale of 1:120

Will Rhys's scale drawing fit on the paper?

You must show how you get your answer.

(3)

(Total for Question 12 is 3 marks)

13 A theatre sold 520 tickets for a show.

35% of the people with tickets bought a programme.

Each of these people bought one programme.

Each programme cost £4.50

Work out the total amount of money the theatre took from selling programmes.

£
(3)

(Total for Question 13 is 3 marks)

- 14 The diagram shows a circular rug and a circular table top.

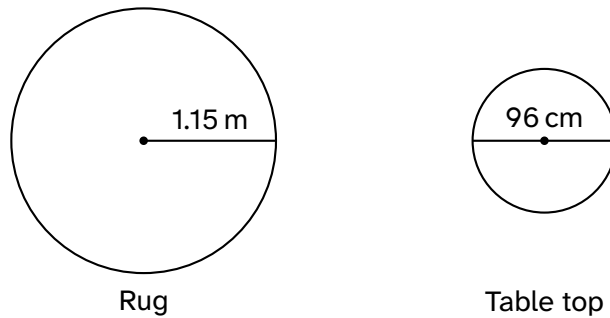


Diagram **NOT** accurately drawn

- (a) The rug has radius 1.15 m.

Work out the area of the rug.

Give your answer correct to 1 decimal place.

..... m²
(2)

- (b) The table top has diameter 96 cm.

Layla has 3 m of trim.

She wants to put the trim all the way around the edge of the table top.

Does Layla have enough trim?

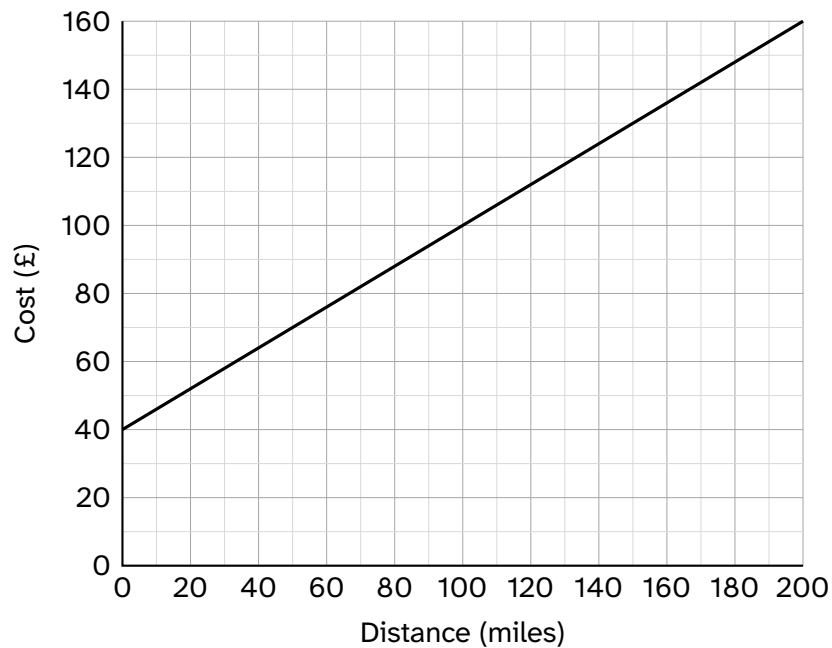
You must show how you get your answer.

(2)

(Total for Question 14 is 4 marks)

15 A company hires out minibuses.

You can use the graph to find the cost of hiring a minibus for a trip of up to 200 miles.



- (a) Use the graph to find the cost of hiring the minibus for a trip of 150 miles.

£
(1)

- (b) The graph only goes up to 200 miles.

The cost of a longer trip is worked out in the same way.

Jayden's football club hires the minibus for a trip of 320 miles.

Work out the cost of hiring the minibus for this trip.

£
(2)

(Total for Question 15 is 3 marks)

16 A shop sells rice in three sizes of bag.

Small bag	Medium bag	Large bag
750 g	2 kg	5 kg
£1.65	£4.30	£10.90

Reece wants to buy some rice.

He wants to get the best value for money.

Which size of bag gives the best value for money?

You must show how you get your answer.

(3)

(Total for Question 16 is 3 marks)

- 17** Use your calculator to work out the value of

$$\frac{6.2^2 + 1.75}{8.4 - 3.06}$$

Write down all the figures on your calculator display.

.....
(2)

(Total for Question 17 is 2 marks)

18 Hana pays a monthly price for her broadband.

Her monthly price is £34.50

The broadband company increases the monthly price by 8%

(a) Work out Hana's new monthly price.

£
(2)

(b) One year later, the company reduces Hana's monthly price by 8%

Hana says,

"My monthly price will go back to £34.50"

Show that Hana is wrong.

(2)
(Total for Question 18 is 4 marks)

19 (a) Expand $3y(2y - 7)$

.....
(1)

(b) Factorise fully $10m^3 - 15m^2$

.....
(2)

(c) Make t the subject of the formula $P = 3r + 4t$

$t =$
(2)

(Total for Question 19 is 5 marks)

20 (a) Find the reciprocal of 0.32

.....
(1)

(b) The mass of a lorry is 6300 kg correct to 2 significant figures.

Let m kg be the mass of the lorry.

Complete the error interval for m .

..... $\leq m <$
(2)

(Total for Question 20 is 3 marks)

21 (a) Write 76 as a product of its prime factors.

.....
(2)

(b) $A = 2^3 \times 3 \times 5$

$$B = 2 \times 3^2 \times 5$$

Fraser says,

“The lowest common multiple (LCM) of A and B is $2 \times 3 \times 5$ ”

Explain why Fraser is wrong.

(1)

(Total for Question 21 is 3 marks)

22 Keira is a window cleaner.

She uses a ladder that is 6.5 m long.

She stands the ladder on horizontal ground with its bottom end 1.6 m from a vertical wall of a house.

The top of the ladder rests against the wall.

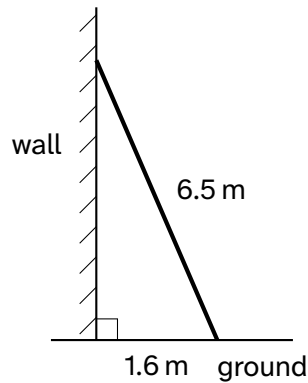


Diagram **NOT** accurately drawn

Keira needs the top of the ladder to reach a window sill.

The window sill is 6.4 m above the ground.

Will the top of the ladder reach the window sill?

You must show how you get your answer.

(3)

(Total for Question 22 is 3 marks)

- 23** The number of members of a running club increased by 15% from 2025 to 2026.
In 2026 the club had 253 members.

Work out the number of members the club had in 2025.

.....
(3)

(Total for Question 23 is 3 marks)

24 Arjun buys a new laptop for £680

The value of the laptop decreases by 12% each year.

Work out the value of the laptop at the end of 3 years.

Give your answer correct to the nearest penny.

£
(3)

(Total for Question 24 is 3 marks)

25 Sadia has a biased dice.

The table shows some of the probabilities that the dice will land on each number.

Number on dice	1	2	3	4	5	6
Probability	0.15		0.2	0.12		0.25

The probability that the dice will land on 2 is the same as the probability that the dice will land on 5

Sadia is going to roll the dice 300 times.

Work out an estimate for the number of times the dice will land on an even number.

.....
(4)

(Total for Question 25 is 4 marks)

26 Yusra runs a farm shop.

Last month she sold 840 litres of milk.

20% of the milk was goat's milk.

The rest of the milk was whole milk and semi-skimmed milk in the ratio

amount of whole milk : amount of semi-skimmed milk = 3:4

She sells the semi-skimmed milk for £1.15 per litre.

Yusra says,

“I took less than £450 from selling semi-skimmed milk last month.”

Is Yusra correct?

You must show how you get your answer.

(5)

(Total for Question 26 is 5 marks)

27 PQR is a right-angled triangle.

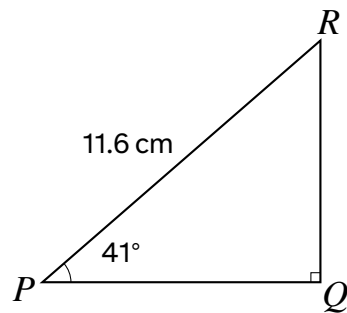


Diagram **NOT** accurately drawn

Work out the length of QR .

Give your answer correct to 3 significant figures.

..... cm
(2)

(Total for Question 27 is 2 marks)

28 A bee has a mass of 8.4×10^{-2} grams.

A grain of pollen has a mass of 2.4×10^{-8} grams.

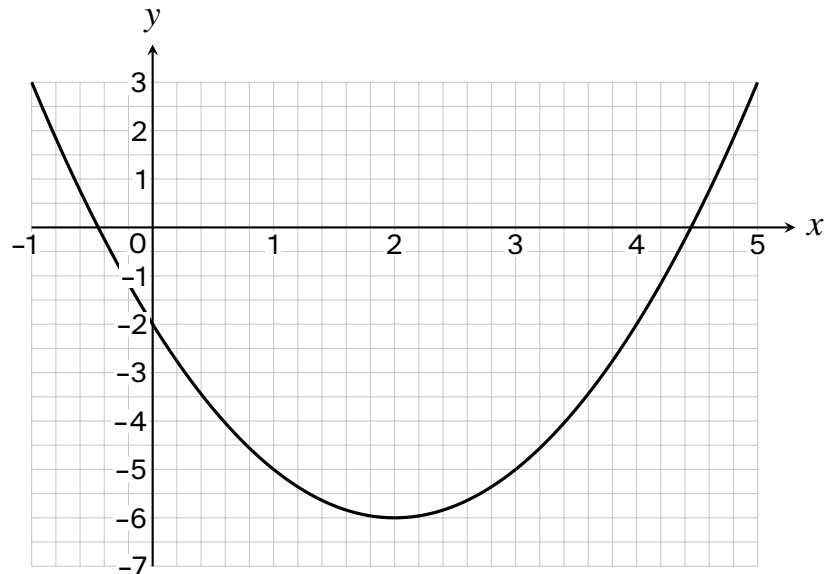
How many times heavier is the bee than the grain of pollen?

Give your answer in standard form.

.....
(2)

(Total for Question 28 is 2 marks)

29 Here is the graph of $y = x^2 - 4x - 2$ for values of x from -1 to 5



(a) Write down the coordinates of the turning point of the graph.

(..... ,)
(1)

(b) Use the graph to find estimates for the solutions of $x^2 - 4x - 2 = 0$

.....
(1)

(c) Tia says,

“There is a value of x for which $x^2 - 4x - 2 = -7$ ”

Is Tia correct?

Give a reason for your answer.

(1)

(Total for Question 29 is 3 marks)

TOTAL FOR PAPER IS 80 MARKS

Formulae Sheet

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation Tier

Perimeter, area and volume

Where a and b are the lengths of the parallel sides and h is their perpendicular separation:

$$\text{Area of a trapezium} = \frac{1}{2}(a + b)h$$

Volume of a prism = area of cross section $\times$ length

Where r is the radius and d is the diameter:

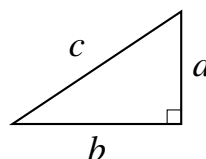
$$\text{Circumference of a circle} = 2\pi r = \pi d$$

$$\text{Area of a circle} = \pi r^2$$

Pythagoras' Theorem and Trigonometry

In any right-angled triangle where a , b and c are the lengths of the sides and c is the hypotenuse:

$$a^2 + b^2 = c^2$$

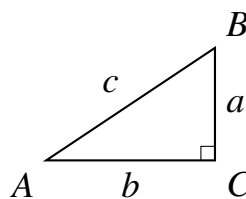


In any right-angled triangle ABC where a , b and c are the lengths of the sides and c is the hypotenuse:

$$\sin A = \frac{a}{c}$$

$$\cos A = \frac{b}{c}$$

$$\tan A = \frac{a}{b}$$



Compound Interest

Where P is the principal amount, r is the interest rate over a given period and n is the number of times that the interest is compounded:

$$\text{Total accrued} = P \left(1 + \frac{r}{100} \right)^n$$

Probability

Where $P(A)$ is the probability of outcome A and $P(B)$ is the probability of outcome B :

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$