

Please check the examination details below before entering your candidate information

Candidate surname		Other names	
Centre Number		Candidate Number	

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Aiming for Grade 5

Paper reference	1MA1/2H
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Mathematics
PAPER 2 (Calculator)
Higher Tier
31 marks 30 minutes



You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator, Formulae Sheet (enclosed). Tracing paper may be used.

Total Marks

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.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.

Information

- The total mark for this paper is 31. There are 11 questions.
- Questions have been broadly arranged in an ascending order of mean difficulty, as found by students achieving Grade 5 in the Summer and November 2023 examinations.
- Questions marked with an asterisk (*) also appear on the Higher Tier paper.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- *1** Write 60 as a product of its prime factors.

.....
(Total for Question 1 is 2 marks)

- *2** (a) Expand and simplify $3(2y - 5) + 7(y + 2)$

.....
(2)

- (b) Factorise fully $6x^2 + 15x$

.....
(2)

- (c) Make g the subject of the formula $f = 3g + 11$

.....
(2)

(Total for Question 2 is 6 marks)

***3** Solve $5x - 14 = 52 - x$

$x =$

(Total for Question 3 is 3 marks)_

***4** Last year a family recycled 800 kg of household waste.
57% of this waste was paper and glass.

weight of paper recycled : weight of glass recycled = 12 : 7

Calculate the weight of glass the family recycled.

..... kg

(Total for Question 4 is 3 marks)

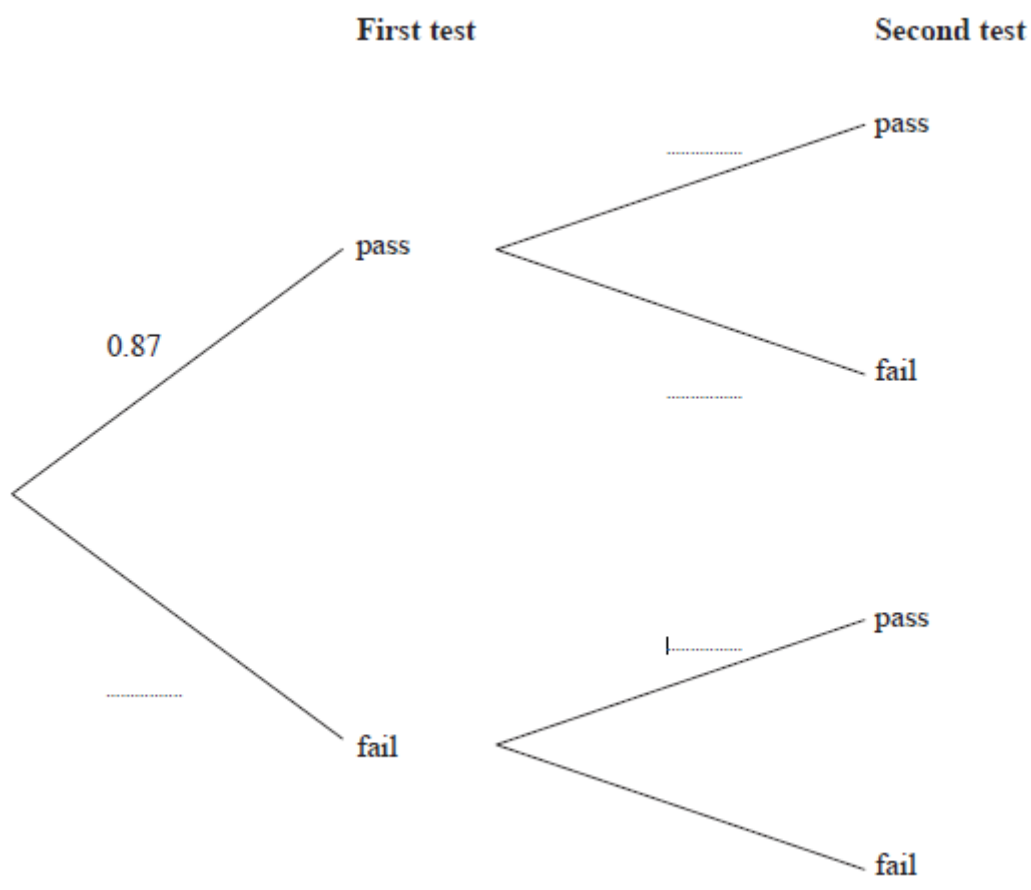
- 5 Shakir has to complete two tests.
He can either pass or fail each test.

The probability that he will pass the first test is 0.87

If he passes the first test the probability he will pass the second test is 0.94

If he fails the first test the probability he will pass the second test is 0.73

Complete the probability tree diagram for this information.



(Total for Question 5 is 2 marks)

***6** Work out the value of $\frac{25 - \sqrt{43.87}}{6 + 2.1^2}$

Write down all the figures on your calculator display.

.....
(Total for Question 6 is 2 marks)

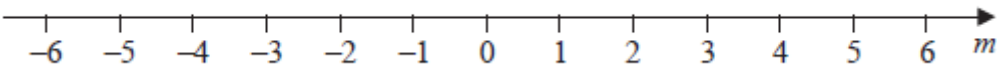
- *7** Tamsin buys a house with a value of £150 000
The value of Tamsin's house increases by 4% each year.
Rachel buys a house with a value of £160 000
The value of Rachel's house increases by 1.5% each year.
At the end of 2 years, whose house has the greater value?
You must show how you get your answer.

(Total for Question 7 is 4 marks)

***8** Andrew invests £4500 in a savings account for 2 years.
 The account pays compound interest at a rate of 3.4% per year.
 Calculate how much Andrew has in this savings account at the end of the 2 years.

£.....
(Total for Question 8 is 2 marks)

***9** On the number line below, show the inequality $-4 \leq m < 1$



(Total for Question 9 is 2 marks)

***10** There are 48 counters in a bag.
 There are only red counters and blue counters in the bag.
 number of red counters : number of blue counters = 1 : 2
 Helen has to work out how many red counters are in the bag.
 She says,
 “There are 24 red counters in the bag because 1 is half of 2 and 24 is half of 48”
 Is Helen correct?
 You must give a reason for your answer.

.....

.....

.....

(Total for Question 10 is 1 mark)

***11** Karen is organising a party for a charity.

She spends

£100 on food

£120 on a hall

£80 on a DJ.

Karen sells 54 tickets for the party.

Each ticket costs £7.50

Work out the percentage profit Karen makes for the charity.

.....%

(Total for Question 11 is 4 marks)

TOTAL FOR PAPER IS 31 MARKS