Paper Reference(s)

5501/01

Edexcel GCSE

Mathematics A – 1387

Paper 1 (Non Calculator)

Foundation Tier

Tuesday 8 June 2004 – Afternoon

Time: 1 hour 30 minutes

Materials required for examination
Ruler graduated in centimetres and
millimetres, protractor, compasses,
pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer **ALL** the questions in the spaces provided in this question paper.
You must NOT write on the formulae page or any blank pages. Anything you write on these pages will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The total mark for this paper is 100. This paper has 23 questions. There is one blank page.
The marks for individual questions and parts of questions are shown in round brackets: e.g. **(2)**.
Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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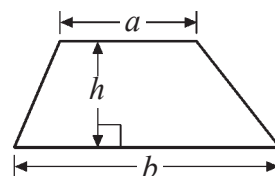
Turn over

Edexcel
Success through qualifications

GCSE Mathematics 1387/8

Foundation Tier Formulae

**You must not write on this page.
Anything you write on this page will gain NO credit**

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

Answer ALL TWENTY THREE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. Ken had **one thousand and twenty pounds**.
   Lisa had **eight pounds and six pence**.

   Write down, in figures, how much money Ken and Lisa each had.

   Ken £ ....

   Lisa £ ....

   (2)

2. Here are the first five terms of a number sequence.

   | 3   8   13   18   23

   (a) Write down the next **two** terms of the sequence.

   ...., ...
   (2)

   (b) Explain how you found your answer.

   ....
   (1)

   (c) Explain why 387 is **not** a term of the sequence.

   ....

   ....
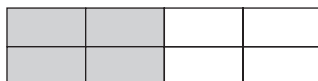   **(1)**

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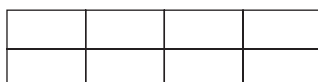
Page Total

3.

(a) (i) What fraction of this shape is shaded?
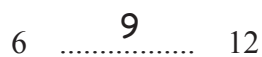   Write your fraction in its simplest form.

   ....

   (ii) Shade $\frac{1}{4}$ of this shape.

   (3)

9 is the number that is half way between 6 and 12.

   6   .....**9**.....   12

(b) Work out the number that is half way between

   (i)   20   60

   (ii) 100 000   ....   200 000

   (iii) 6.5   ....   6.6

   (iv) $\frac{1}{4}$ .... $\frac{1}{2}$

   (4)

(c) Find the point on the line AB that is **exactly** $\frac{1}{3}$ of the way along the line **from A**.
   Mark this point with a cross (×).

   _A_   _B_

   (1)

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4. (a) Write down a sensible **metric** unit that should be used to measure

(i) the height of a school hall,

....

(ii) the weight of a pencil.

....
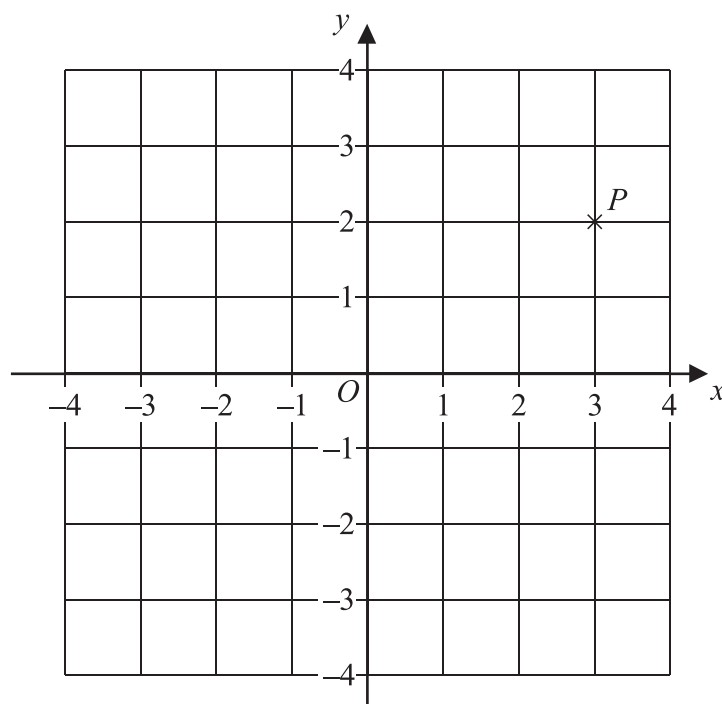**(2)**

(b) Write down a sensible **imperial** unit that should be used to measure the distance between London and Manchester.

....
(1)

5.

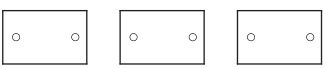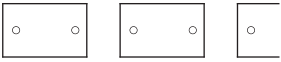(a) Write down the coordinates of the point *P*.

(.......... , ...)
(1)

(b) (i) On the grid, plot the point (0, 3).
Label the point *Q*.

(ii) On the grid, plot the point (–2, –3).
Label the point *R*.

(2)

Page Total

6. The pictogram shows the number of videos borrowed from a shop on Monday and on Tuesday.

Monday	[video] [video] [video]
Tuesday	[video] [video] [half]
Wednesday	
Thursday	

[video] Represents 10 videos

(a) Write down the number of videos borrowed on

(i) Monday,

....

(ii) Tuesday.

....

(2)

On Wednesday, 40 videos were borrowed.
On Thursday, 15 videos were borrowed.

(b) Show this information on the pictogram.

(2)

7. You can use this rule to work out the total number of points a football team got last season.

| Multiply the number of wins by 3 and then add the number of draws |

Last season Rovers had 10 wins and 0 draws.

(a) Use the rule to work out the total number of points Rovers got last season.

....

(1)

Last season United had 20 wins and 5 draws.

(b) Use the rule to work out the total number of points United got last season.

....

(2)

Do not write here

8.
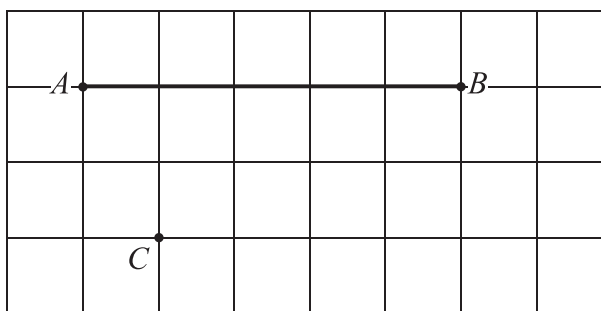
(a) On the grid, draw a line from the point *C* perpendicular to the line *AB*.

(1)

(b) Sketch a cylinder in the space below.

(1)

Do not write here

Page Total

9. Nick takes 26 boxes out of his van.
The weight of each box is 32.9 kg.

(a) Work out the **total** weight of the 26 boxes.

.... kg

(3)

Then Nick fills the van with large wooden crates.
The weight of each crate is 69 kg.
The greatest weight the van can hold is 990 kg.

(b) Work out the greatest number of crates that the van can hold.

....

(4)

Do not write here

10. Sally wrote down the temperature at different times on 1st January 2003.

Time	Temperature
midnight	− 6 °C
4 am	−10 °C
8 am	− 4 °C
noon	7 °C
3 pm	6 °C
7 pm	−2 °C

(a) Write down

(i) the **highest** temperature,

.......................°C

(ii) the **lowest** temperature.

.......................°C

(2)

(b) Work out the difference in the temperature between

(i) 4 am and 8 am,

.......................°C

(ii) 3 pm and 7 pm.

.......................°C

(2)

At 11 pm that day the temperature had fallen by 5 °C from its value at 7 pm.

(c) Work out the temperature at 11 pm.

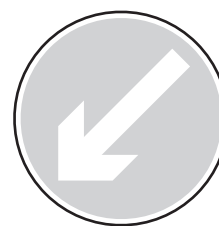.......................°C

(1)

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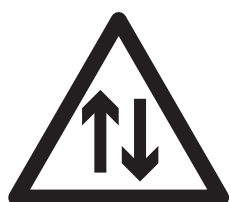**Page Total**

11. Here are four road signs.

A

B

C
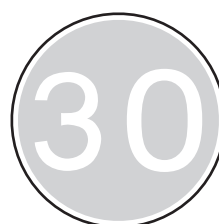
D

Two of these road signs have one line of symmetry.

(a) Write down the letters of each of these **two** road signs.

.... and ....
(2)

Only **one** of these four road signs has rotational symmetry.

(b) (i) Write down the letter of this road sign.

....

(ii) Write down its order of rotational symmetry.

....
(2)

Do not write here

12. There are 800 students at Prestfield School.

144 of these students were absent from school on Wednesday.

(a) Work out how many students were **not** absent on Wednesday.

....
(2)

Trudy says that more than 25% of the 800 students were absent on Wednesday.

(b) Is Trudy correct? Explain your answer.

....

....
(2)

45% of these 800 students are girls.

(c) Work out 45% of 800

....
(2)

There are 176 students in Year 10.

(d) Write 176 out of 800 as a percentage.

.........................%
(2)

Do not write here

Page Total

13. Here is a list of eight numbers.

$$5 \qquad 6 \qquad 12 \qquad 20 \qquad 25 \qquad 26 \qquad 28 \qquad 33$$

(a) From the list, write down

(i) a square number,

....

(ii) a number that is a multiple of 7,

....

(iii) **two** numbers that are factors of 40,

.... and ....

(iv) **two** numbers with a sum of 59.

.... and ....

(4)

(b) Tony says that "6 is a cube number because $2^3 = 6$".
Tony is wrong. Explain why.

....

(1)

14. The diagram shows a rectangular carpet.

5 m

Diagram **NOT**
accurately drawn

2 m
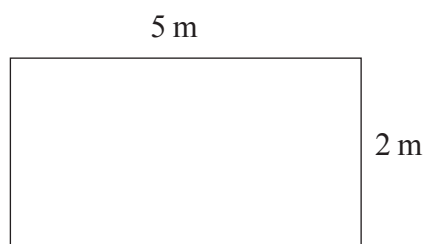
Work out the area of the carpet.

....

(2)

15. (a) Work out $\dfrac{11}{12} - \dfrac{5}{6}$

....

(2)

(b) Estimate the value of $\dfrac{68 \times 401}{198}$

....

(2)

16. (a) Simplify $y + y$

....
(1)

(b) Simplify $p^2 + p^2 + p^2$

....
(1)

(c) Factorise $x^2 - 3x$

....
(2)

17. 60 British students each visited one foreign country last week.
The two-way table shows some information about these students.

	France	Germany	Spain	Total
Female			9	34
Male	15			
Total		25	18	60

(a) Complete the two-way table.

(3)

One of these students is picked at random.

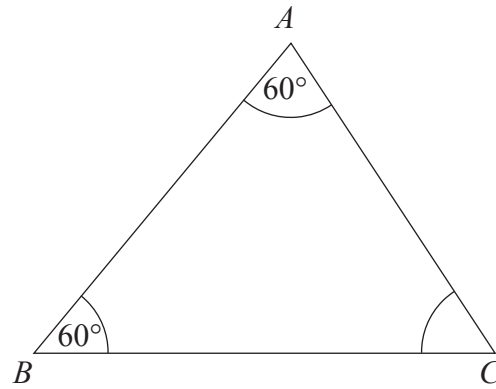(b) Write down the probability that the student visited Germany last week.

....
(1)

Do not write here

Page Total

18.

A

60°

60°
B   C

Diagram **NOT** accurately drawn

(a) (i) Find the size of angle *C*.

.............................°

(ii) Triangle *ABC* is equilateral.
Explain why.

....

(2)

(b)

S

Diagram **NOT** accurately drawn

x°   50°
P   Q   R
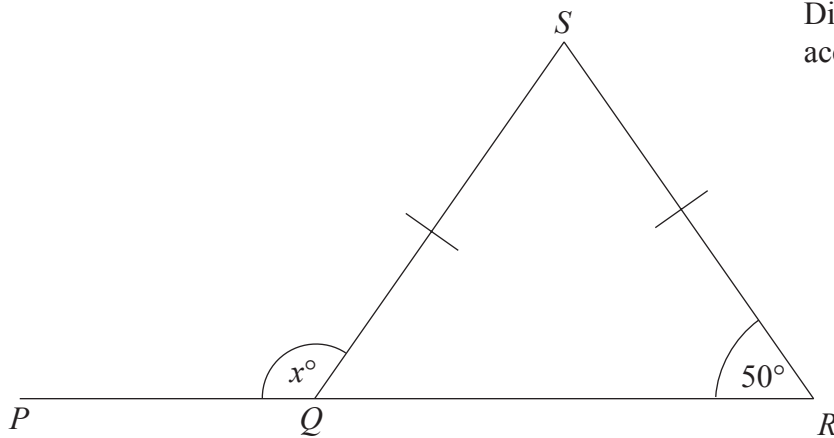
PQR is a straight line.
SQ = *SR*.

(i) Work out the size of the angle marked *x*°.

.............................°

(ii) Give reasons for your answer.

....

....

(3)

14

(c)

Diagram **NOT**
accurately drawn
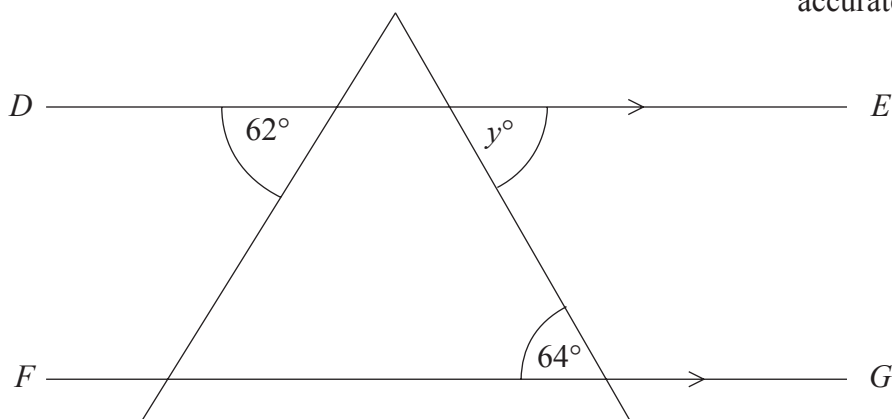
DE is parallel to *FG*.
Find the size of the angle marked *y*°.

...........................°

(1)

19. 20 students scored goals for the school hockey team last month.
The table gives information about the number of goals they scored.

Goals scored	Number of students	
1	9	
2	3	
3	5	
4	3	

(a) Write down the modal number of goals scored.

....

(1)

(b) Work out the range of the number of goals scored.

....

(1)

(c) Work out the mean number of goals scored.

....

(3)

Page Total

20. Anil cycled from his home to the park.
Anil waited in the park.
Then he cycled back home.
Here is a distance-time graph for Anil's complete journey.
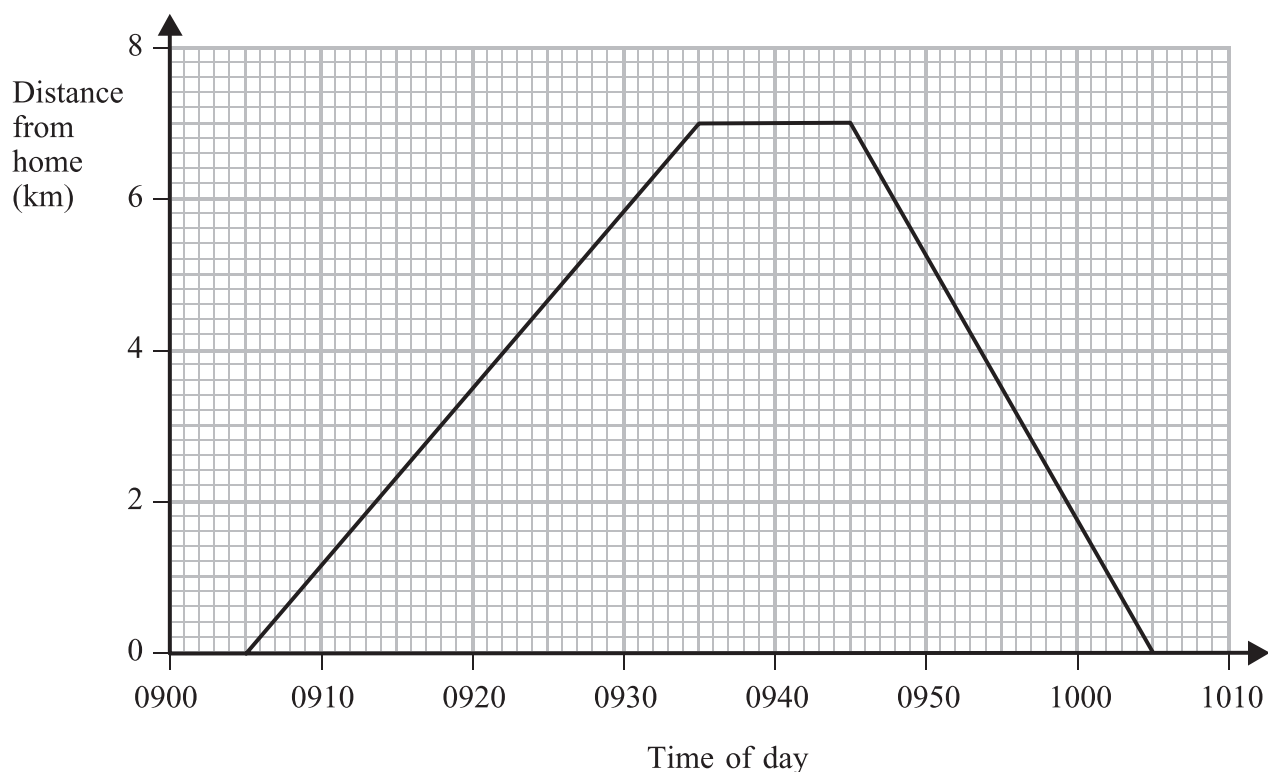
(a) At what time did Anil leave home?

....
(1)

(b) What is the distance from Anil's home to the park?

.... km
(1)

(c) How many minutes did Anil wait in the park?

....
(1)

(d) Work out Anil's average speed on his journey home.
Give your answer in kilometres per hour.

.... kilometres per hour
(3)

21.
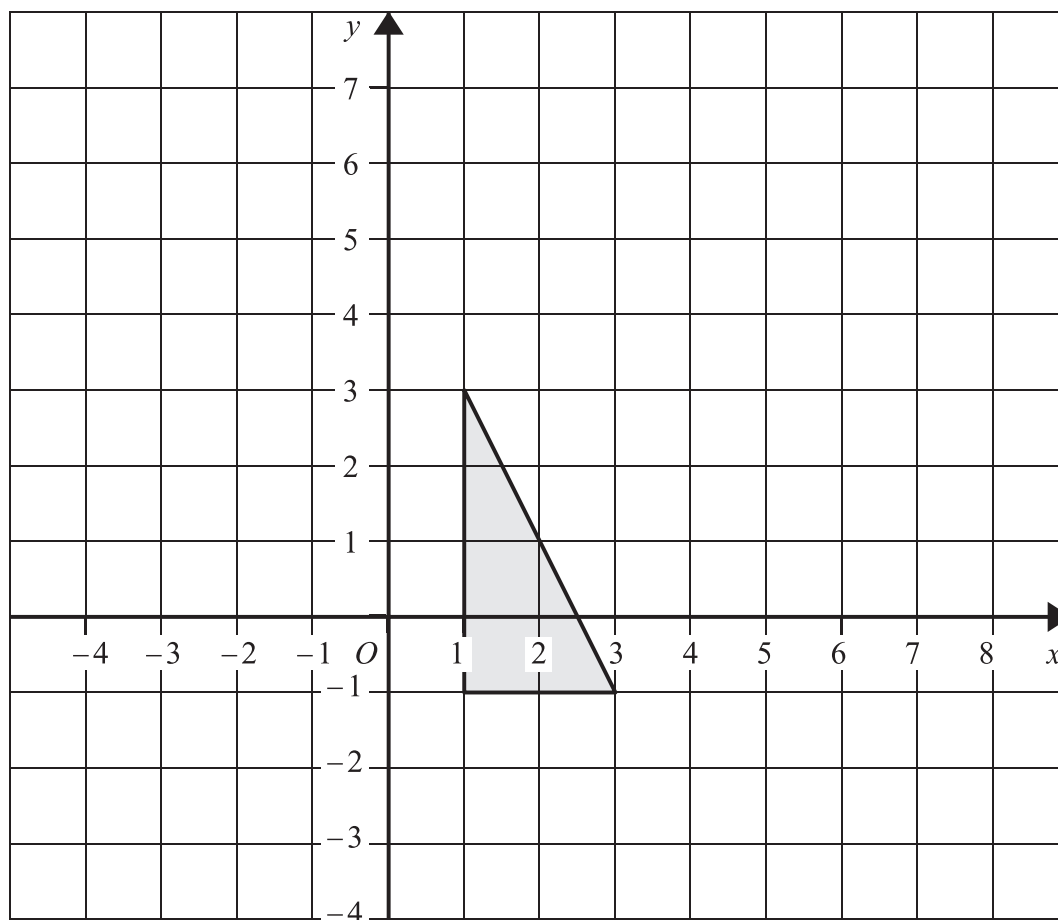
Enlarge the shaded triangle by a scale factor 2, centre *O*.

(3)

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Page Total

22. Neil buys a box of tiles.
The shape of the box is a cuboid.
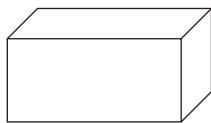
(a) How many vertices has a cuboid?

....
(1)

Here is a tile in the shape of a polygon.
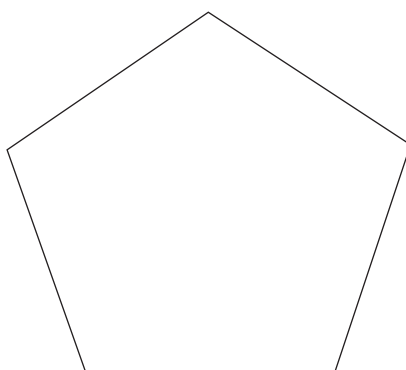
Diagram **NOT**
accurately drawn

(b) Write down the mathematical name of this polygon.

....
(1)

The area of the tile is 8560 mm^2.

(c) Change 8560 mm^2 to cm^2.

.......................cm^2
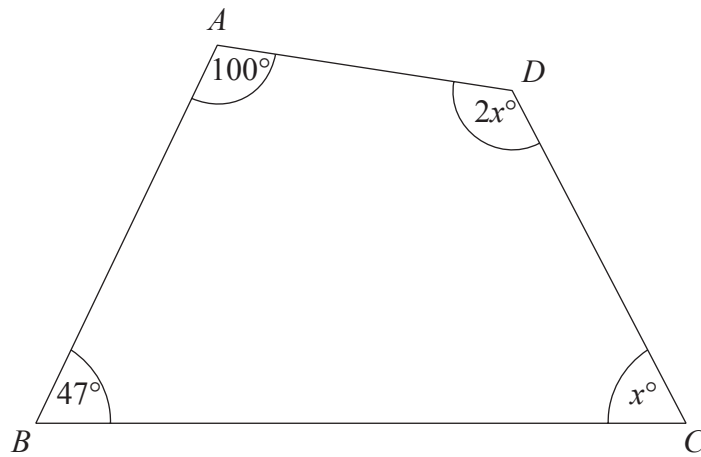**(2)**

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23.

A

100°

D

2x°

47°

B

x°

C

Diagram **NOT** accurately drawn

ABCD is a quadrilateral.

Work out the size of the largest angle in the quadrilateral.

°

....

(4)

TOTAL FOR PAPER: 100 MARKS

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