



THIRD SPACE  
LEARNING

# Mathematics

## Paper 2

### (Calculator)

## Foundation Tier

Edexcel GCSE

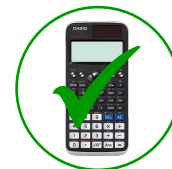
SET 1A

# Mathematics Paper 2 (Calculator) Foundation Tier Edexcel

## GCSE SET 1A

Name

Total marks



Paper length: 1hr 30mins

## 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.
- Calculators may not be used.

## Information

- The total mark for this paper is 80
- 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.

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

This practice paper is based on the topics from the **advanced information for the Summer 2022 exam series**.

*Please note, this practice paper is an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers*

1 Write 0.73 as a percentage.

-----  
(Total for Question 1 is 1 mark)

2 Circle the multiples of 8.

2      16      4      20      32      1      40

-----  
(Total for Question 2 is 1 mark)

3 Write the correct symbol from  $<$ ,  $>$  or  $=$  in each of these statements.

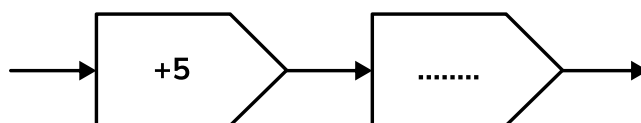
204 ..... 240

177 ..... 170

-8 ..... 6

-----  
(Total for Question 3 is 3 marks)

4 Here is a function machine.



Melody records some inputs and outputs in a table:

Input	Output
3	16
5	20
10	30

(a) What operation occurs in the second part of the function machine?

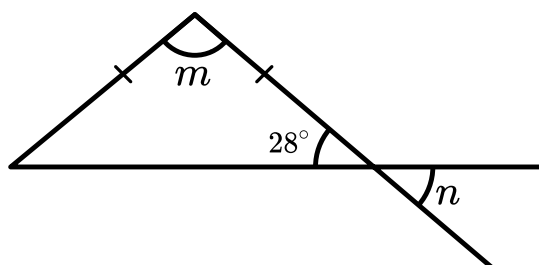
-----  
(1)

(b) Melody tries another input. The output is 24. What number did Melody input?

-----  
(1)

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

5 Work out the size of the angles marked  $m$  and  $n$ .

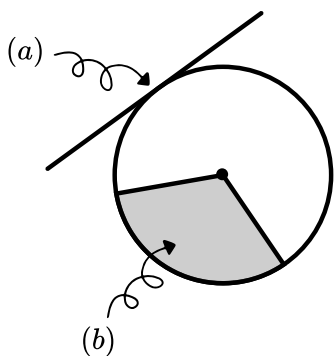


$m =$  -----  
(2)

$n =$  -----  
(1)

**(Total for Question 5 is 3 marks)**

6 Name the parts of the circle indicated below.



a: .....

b: .....

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

7 Here is a set of data:

11    12    12    14    16    17    23    25    30

(a) Write down the mode.

.....  
**(1)**

(b) Write down the median.

.....  
**(1)**

(c) Calculate the range.

.....  
**(2)**

**(Total for Question 7 is 4 marks)**

**8** Here is a set of data:

2    5    9    6    8    3  
3    7    9    3    2    3  
8    4    6    1    2    7

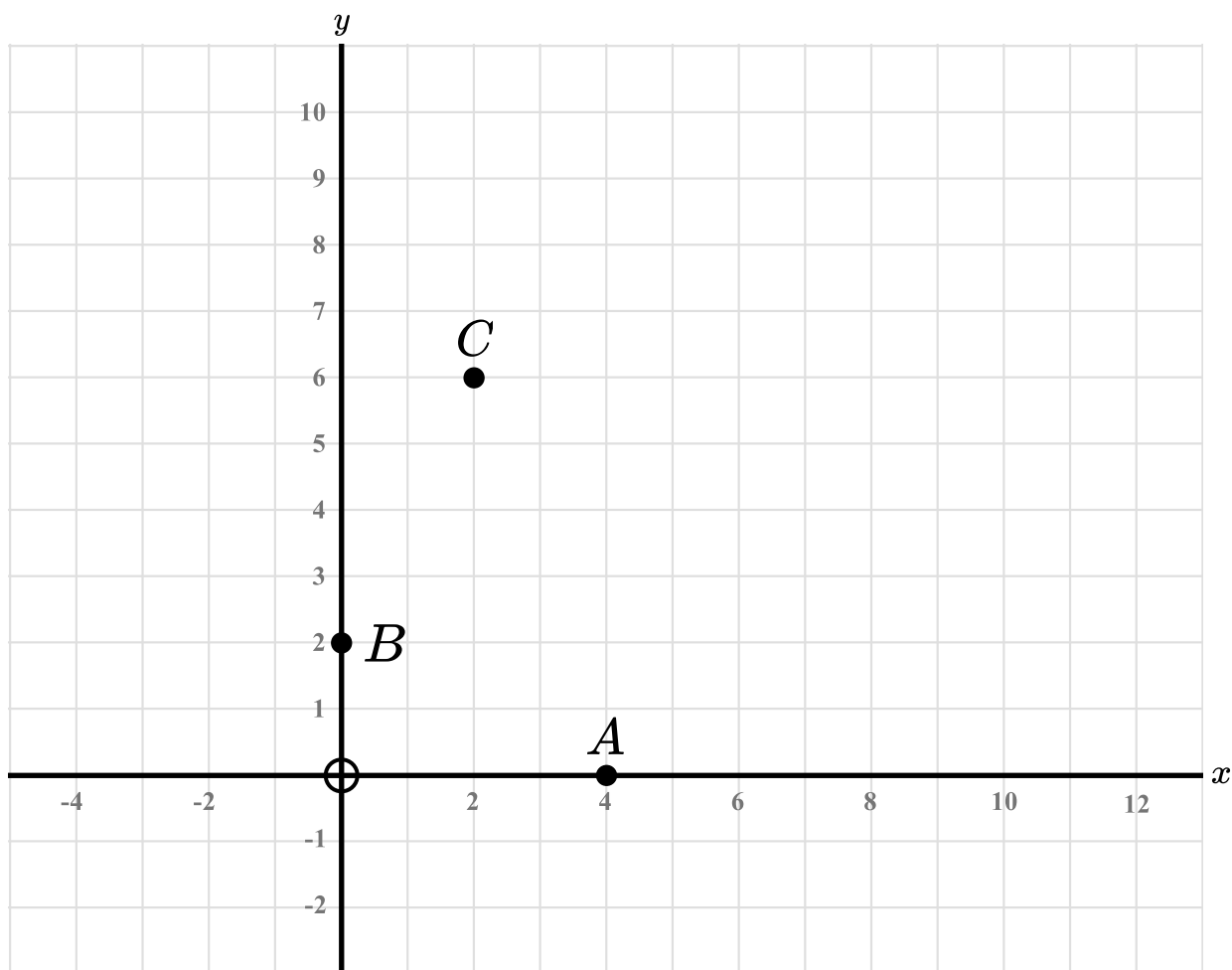
Complete the frequency table below:

	Tally	Frequency
<b>1-3</b>		
<b>4-6</b>		
<b>7-9</b>		

**(Total for Question 8 is 2 marks)**

---

9



(a) Points A, B and C are three corners of a square. Mark the fourth corner on the grid and label it D.

(1)

(b) Write down the coordinates of D.

-----  
(1)

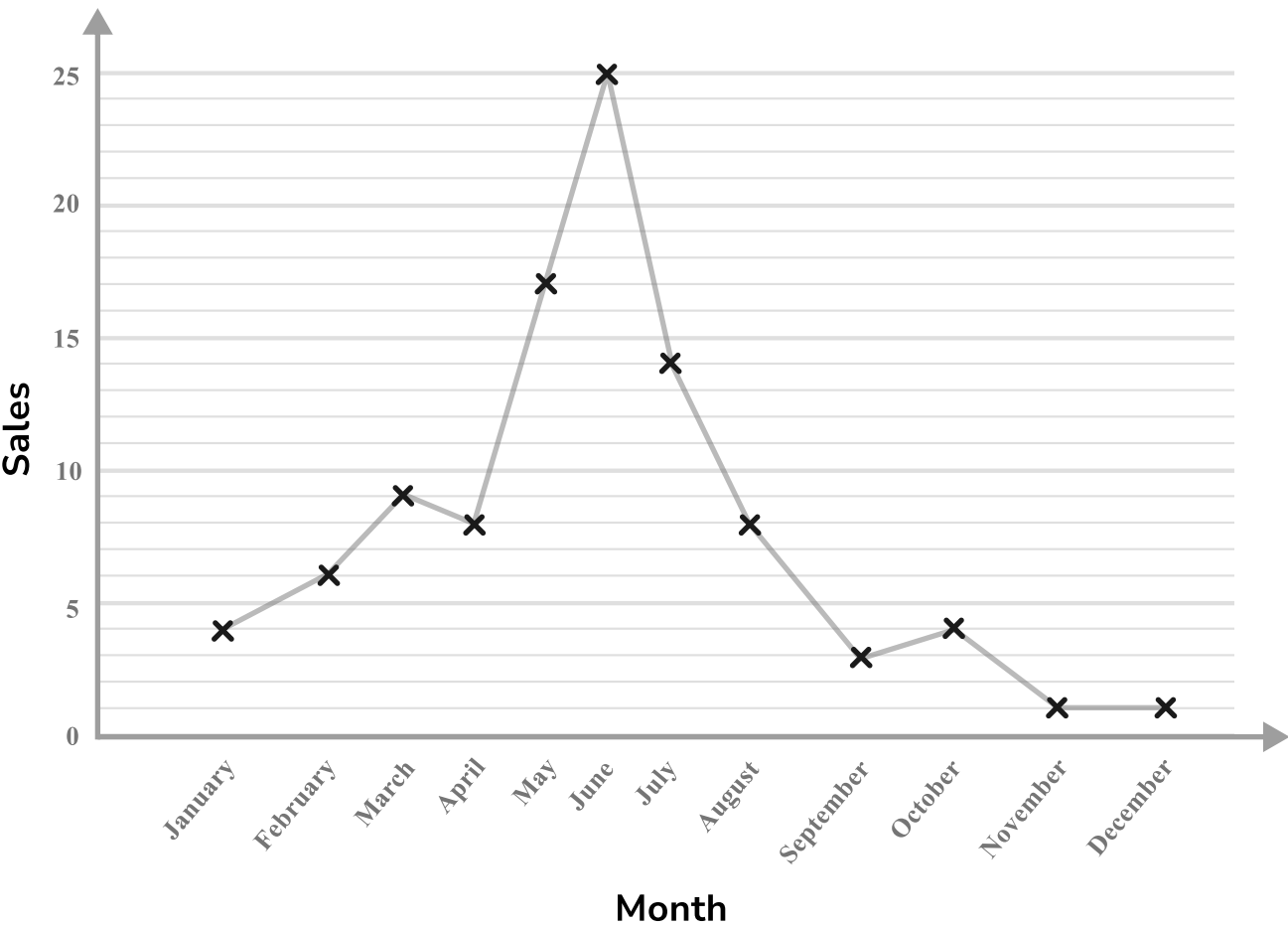
(c) Write down a line that is perpendicular to AB.

-----  
(1)

**(Total for Question 9 is 3 marks)**

10 This graph shows the sales of tents over the course of two years.

Sales by month



(a) In which month were sales highest?

(1)

(b) Give a reason why this might be the case.

(1)

(Total for Question 10 is 2 marks)



**11** Harry, Fred and Percy all take a maths test.

Harry gets  $\frac{4}{5}$  of the questions correct.

Fred gets  $\frac{3}{4}$  of the questions correct.

Percy gets  $\frac{17}{20}$  of the questions correct.

Rank the students from highest mark to lowest mark.

-----  
(Total for Question 11 is 3 marks)

**12** Complete the two way table showing the gender and eye colour of the students in a school.

	Blue	Brown	Green	Total
Male	21			67
Female	37	31	15	
Total		64		150

(Total for Question 12 is 2 marks)

**13** Fill in the boxes to make the calculations correct.

(a)  $\boxed{-40} \quad \boxed{\div} \quad \boxed{\phantom{00}} \quad \boxed{=}$   $\boxed{8}$

(b)  $\boxed{\frac{2}{5}} \quad \boxed{\times} \quad \boxed{\phantom{00}} \quad \boxed{=}$   $\boxed{\frac{8}{35}}$

(c)  $\boxed{\phantom{00}} \quad \boxed{\div} \quad \boxed{\frac{3}{4}} \quad \boxed{=}$   $\boxed{\frac{2}{5}}$

(Total for Question 13 is 4 marks)

**14** Lorraine and Megan go on holiday to Rome.

Lorraine converts £150 to euros.

The exchange rate is £1 = €1.19.

(a) How many euros does she receive?

-----  
(2)

(b) On the last evening they go for a meal.

<b>Pizza</b>	<b>€10</b>
<b>Pasta</b>	<b>€11.0</b>
<b>Ice cream</b>	<b>€4.25</b>
<b>Tiramisu</b>	<b>€4.20</b>
<b>Drink</b>	<b>€1.95</b>

Lorraine orders a pizza, ice cream and a drink and Megan orders a pizza, tiramisu and a drink. Lorraine has €20 left and Megan has €15 left. Do they have enough money in total to pay for the meal? Show how you decide.

-----  
(2)

**(Total for Question 14 is 4 marks)**

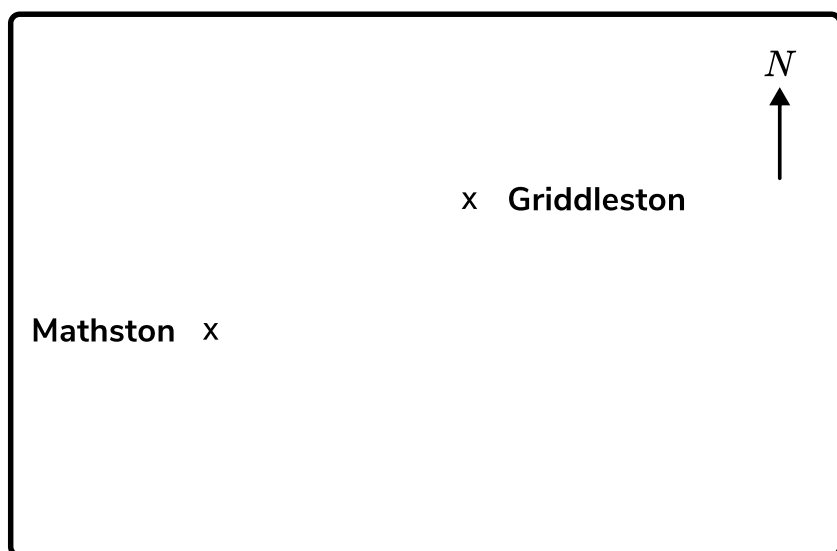
- 15** Gary buys an antique for £180. He sells the antique for £201. Calculate Gary's percentage profit.  
Give your answer to 1dp.

(Total for Question 15 is 3 marks)

- 16** (a) Nadim has a map. On Nadim's map 20cm is equivalent to a real life distance of 50km. Write this scale as a ratio in its simplest form 1: $n$ .

(2)

Ruth has a different map. The scale on Ruth's map is 1cm to 5km.



- (b) Work out the real life distance between Mathston and Griddleston.

(2)

- (c) Hapston is 15km due south of Griddleston. Mark this on the map.

(2)

- (d) Ruth cycles from Mathston to Griddleston to Hapston and back to Mathston. The timings for each part of her journey are shown below.

Mathston to Griddleston	2.5 hours
Griddleston to Hapston	1 hour
Hapston to Mathston	1.75 hours

Work out the total time of Ruth's journey. Give your answer in minutes.

(2)

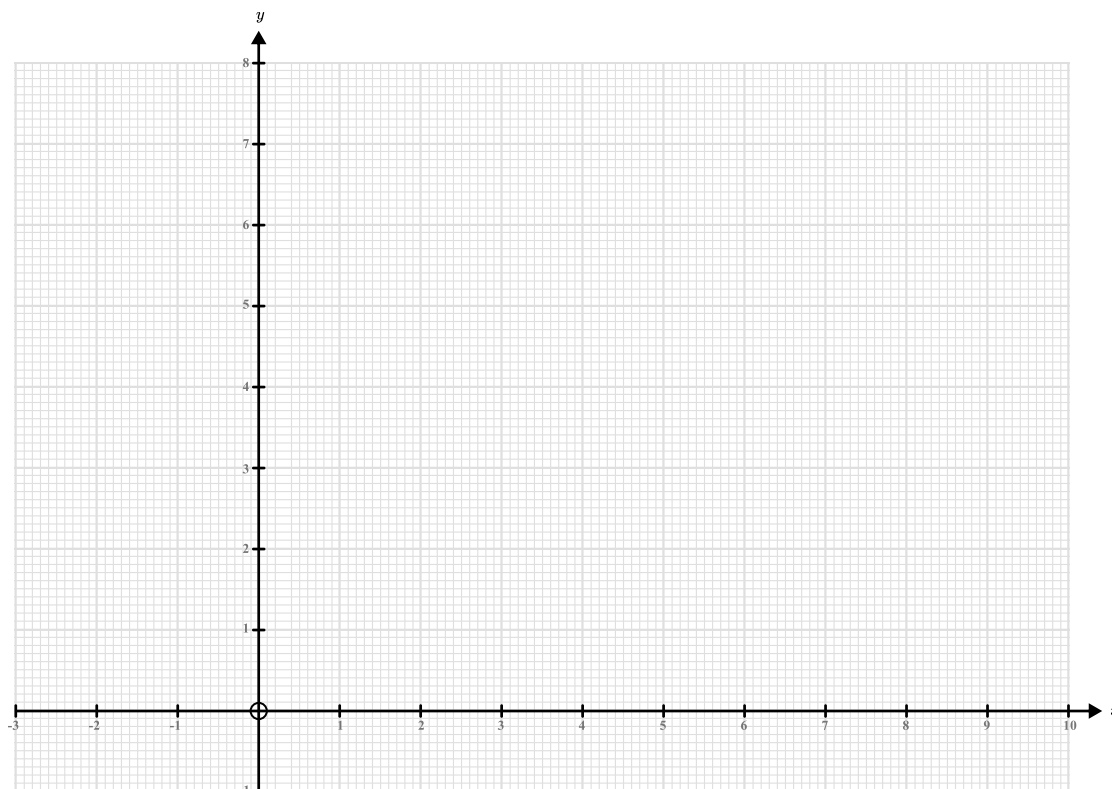
(Total for Question 16 is 8 marks)

17 (a) Complete the table of values for  $x + y = 6$ .

$x$	-1	0	1	2	3	4
$y$						

(2)

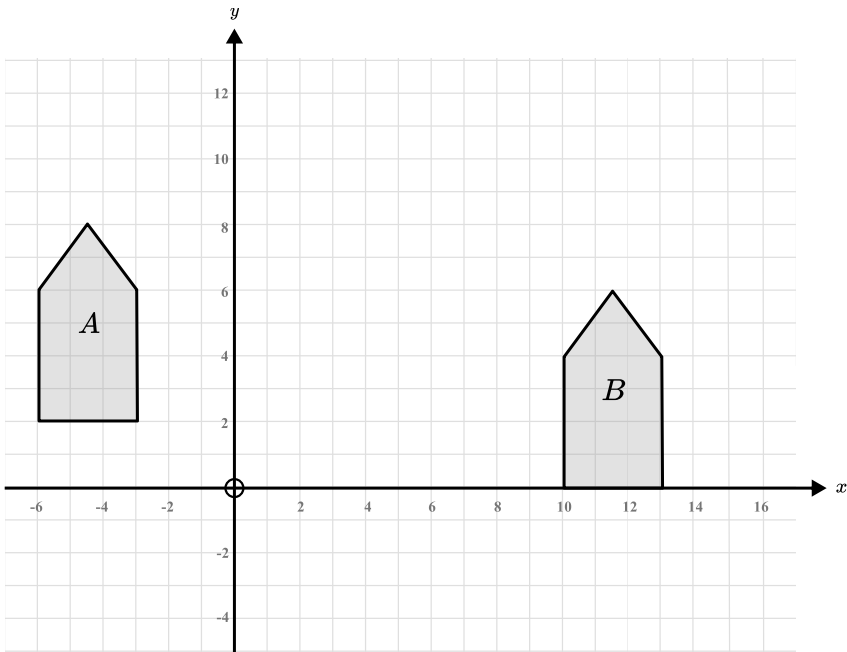
(b) Plot the graph of  $x + y = 6$  on the axes below.



(2)

(Total for Question 17 is 4 marks)

18



(a) Write down the name of shape A

-----  
(1)

(b) Rotate shape A  $90^\circ$  clockwise about the origin

(2)

(c) Mark says that the transformation to get from shape A to shape B is a translation of  $\begin{pmatrix} 13 \\ -2 \end{pmatrix}$   
Is Mark correct? Explain your answer.

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

(Total for Question 18 is 5 marks)

19 (a) Expand and simplify  $3(q + 5) - 2(q - 4)$

-----  
(2)

(b) Factorise  $x^2 + 6x$

-----  
(1)

(c) Expand and simplify  $(x + 3)(x - 5)$

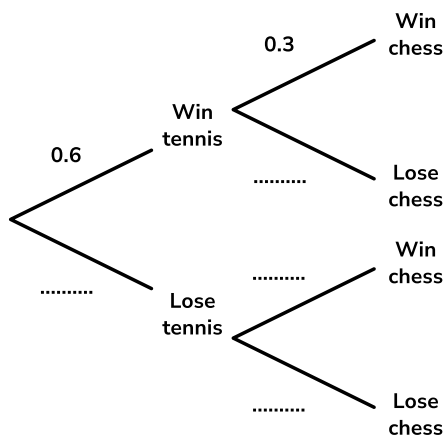
-----  
(2)

**(Total for Question 19 is 5 marks)**

20 The probability that Lucy wins a game of tennis is 0.6. The probability that she wins a game of chess is 0.3.

On Saturday Lucy plays tennis in the morning and chess in the afternoon.

(a) Complete the following tree diagram.



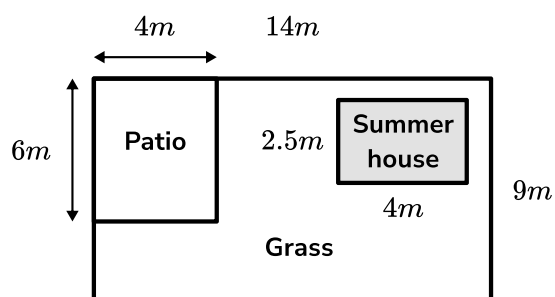
(2)

(b) Find the probability that Lucy wins one game and loses the other.

-----  
(2)

**(Total for Question 20 is 4 marks)**

**21** Here is a diagram of Nooha's garden.



(a) Find the total grassed area.

.....  $m^2$   
(3)

(b) Convert the area to  $cm^2$

.....  
(2)

**(Total for Question 21 is 5 marks)**

**22** Solve the following pair of simultaneous equations.

$$2a + 3b = 16$$

$$3a - b = 2$$

a= .....

b= .....

**(Total for Question 22 is 3 marks)**

- 23** A car is bought for £12000. The value of the car depreciates by 10% per year. Find the value of the car after 2 years.

-----  
(Total for Question 23 is 3 marks)

---

- 24** (a) Write down the value of  $7^0$

-----  
(1)

(b) Simplify  $\frac{6a^3b^3 \times 2a^4}{3a^2b^4}$

-----  
(2)

(Total for Question 24 is 3 marks)

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- 25** The weight of a horse is 350kg to the nearest 10kg. Complete the error interval for the mass of the horse.

-----  $\leq$  mass (kg)  $<$  -----

(Total for Question 25 is 2 marks)



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