

Name: \_\_\_\_\_

## GCSE (1 – 9)

# Cubic and Reciprocal Graphs

### Instructions

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

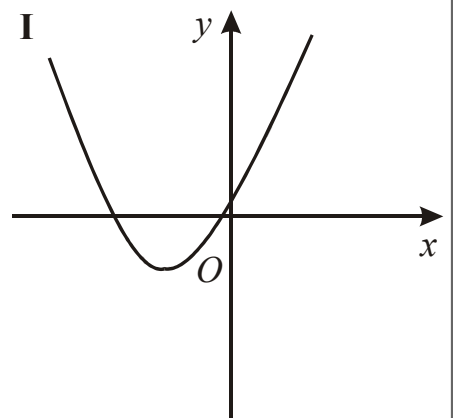
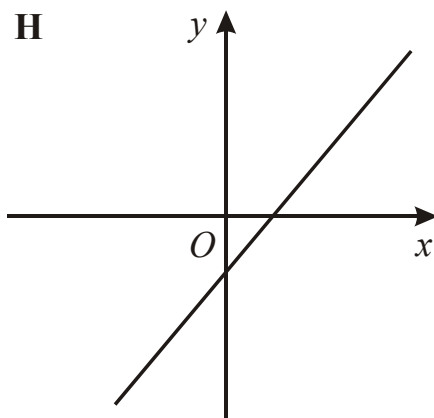
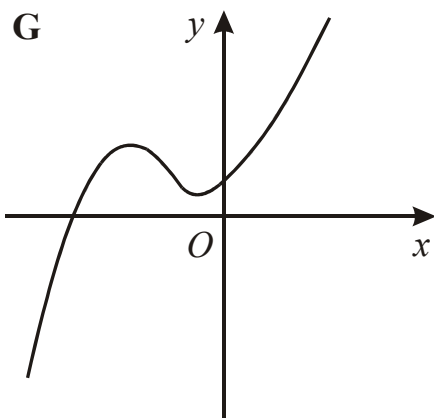
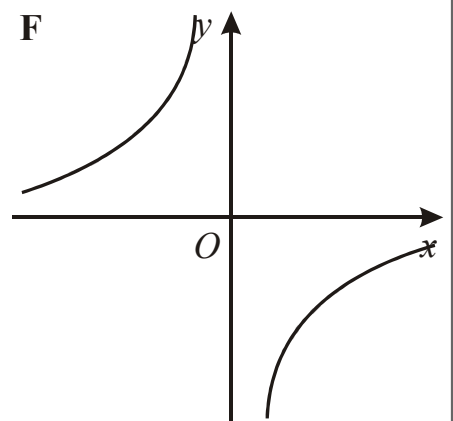
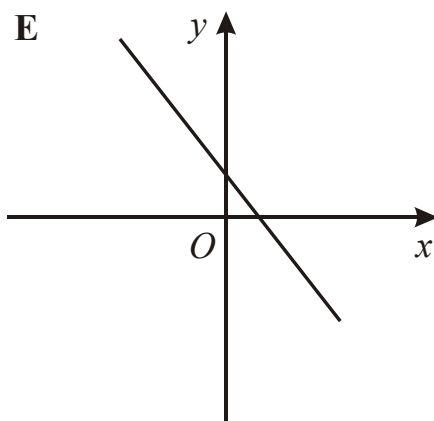
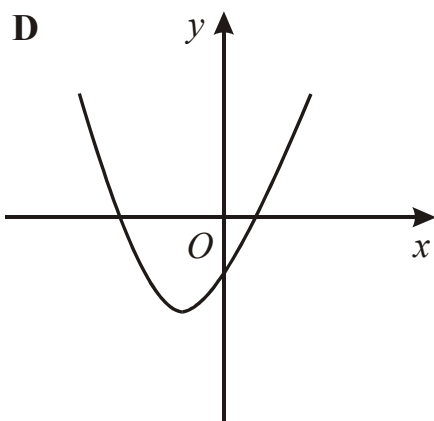
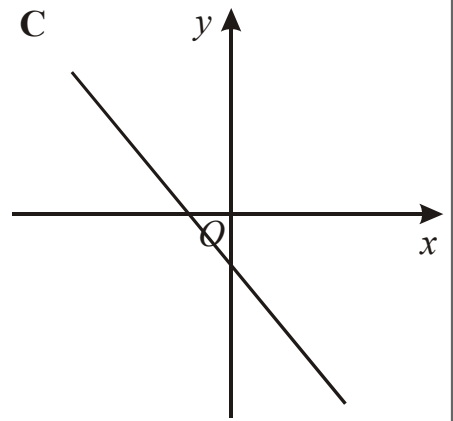
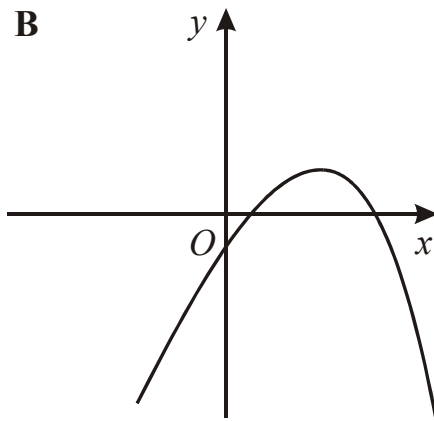
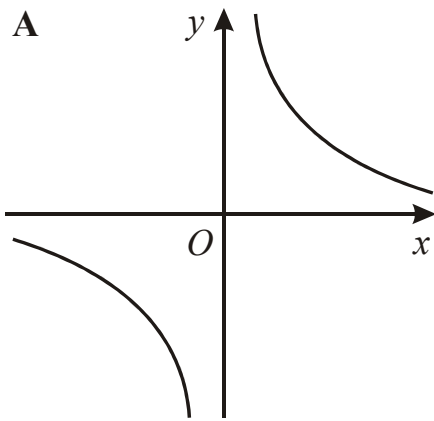
### Information

- 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

1 Here are nine graphs.



Write down the letter of the graph that could have the equation:

(i)  $y = 3x - 2$

.....

(1)

(ii)  $y = 2x^2 - 5x - 3$

.....

(1)

(iii)  $y = \frac{3}{x}$

.....

(1)

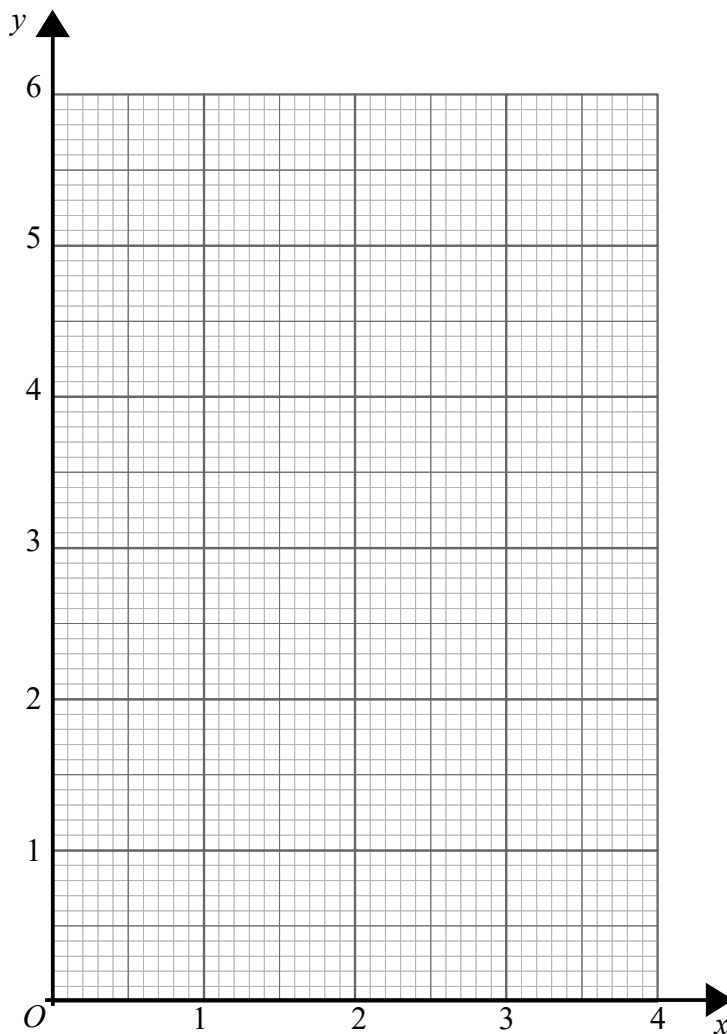
**(Total for Question 1 is 3 marks)**

2 (a) Complete the table of values for  $y = \frac{1}{x}$

$x$	0.2	0.4	0.8	1	2	4
$y$						

(2)

(b) On the grid, draw the graph of  $y = \frac{1}{x}$



(2)

(Total for Question 2 is 4 marks)

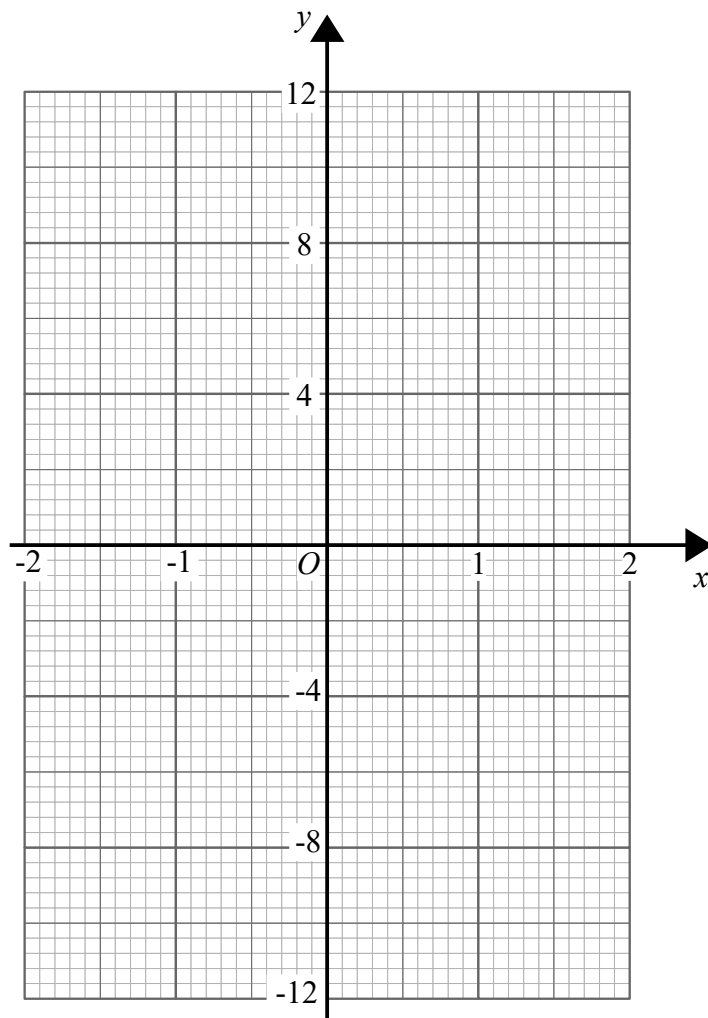
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3 (a) Complete the table of values for  $y = x^3 + x - 2$

$x$	-2	-1	0	1	2
$y$					

(2)

(b) On the grid, draw the graph of  $y = x^3 + x - 2$



(2)

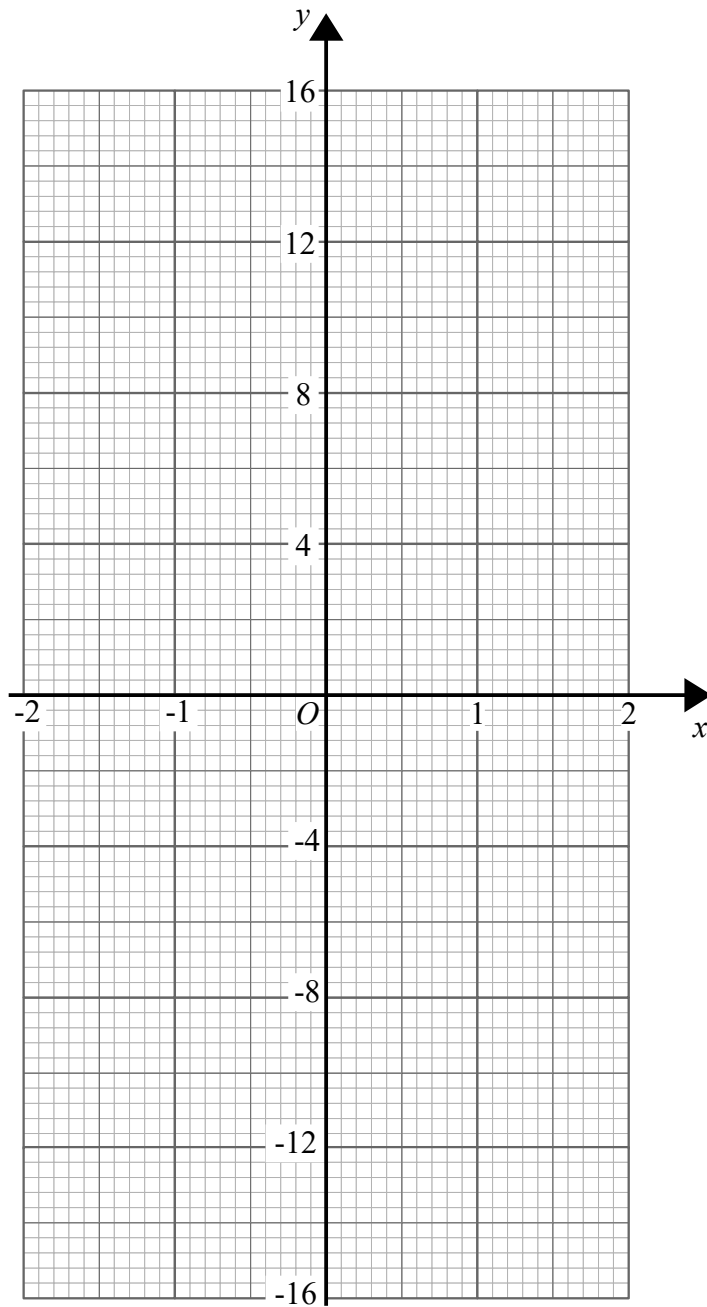
(Total for Question 3 is 4 marks)

4 (a) Complete the table of values for  $y = x^3 + 3x$

$x$	-2	-1	0	1	2
$y$					

(2)

(b) On the grid, draw the graph of  $y = x^3 + 3x$



(2)

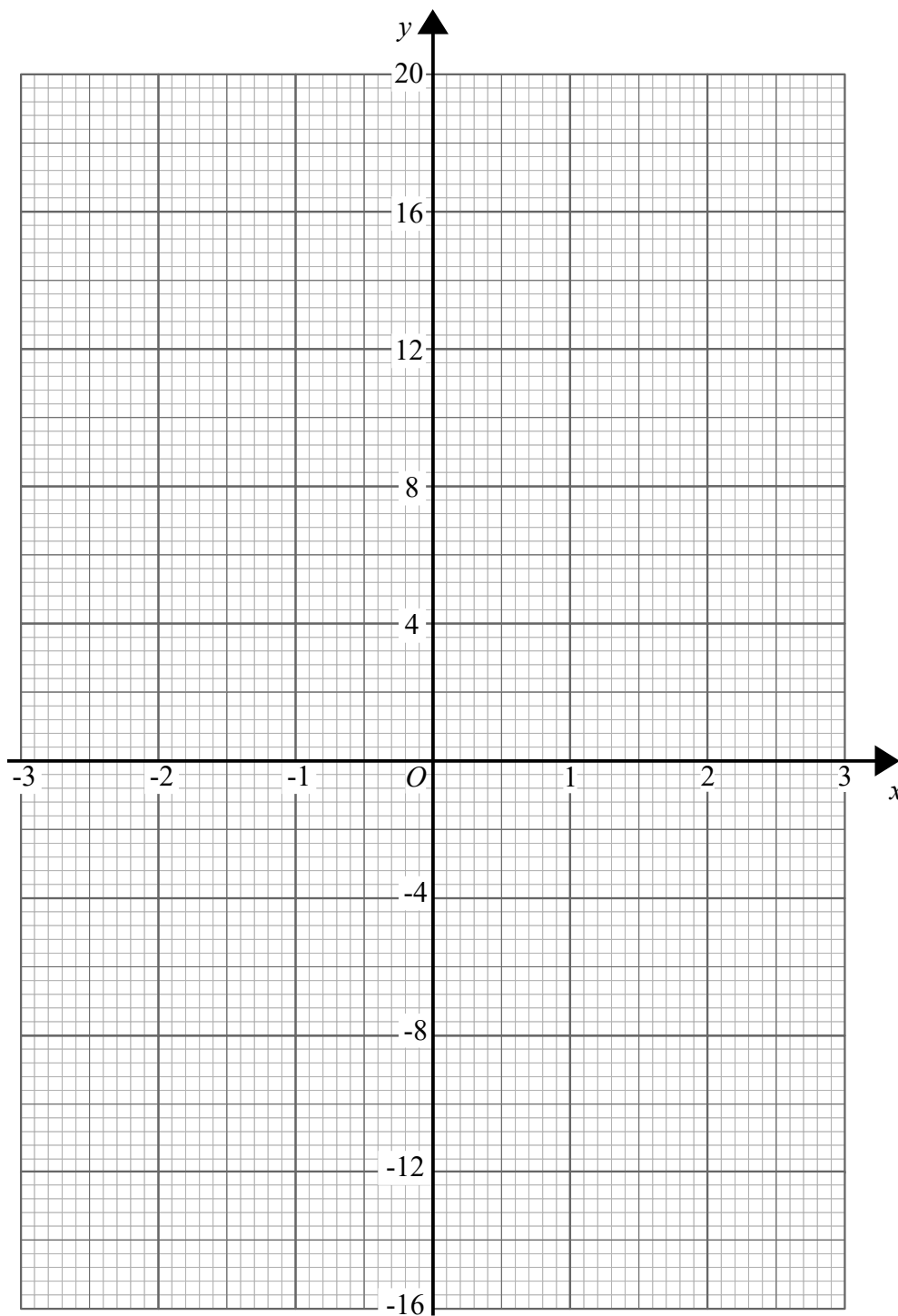
(Total for Question 4 is 4 marks)

5 (a) Complete the table of values for  $y = x^3 - 3x + 2$

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

(2)

(b) On the grid, draw the graph of  $y = x^3 - 3x + 2$



(2)

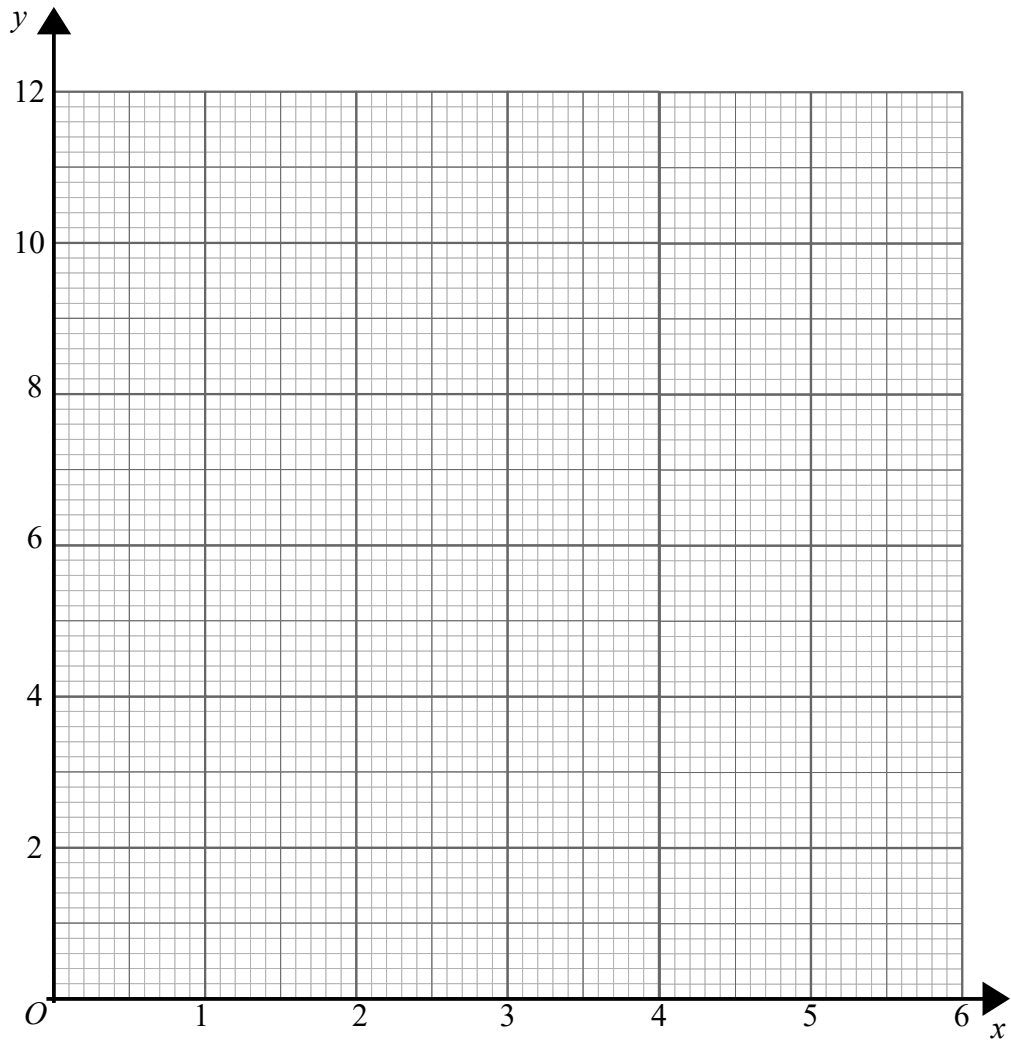
(Total for Question 5 is 4 marks)

6 (a) Complete the table of values for  $y = \frac{6}{x}$

$x$	0.5	1	1.5	2	3	4	5	6
$y$								

(2)

(b) On the grid, draw the graph of  $y = \frac{6}{x}$



(2)

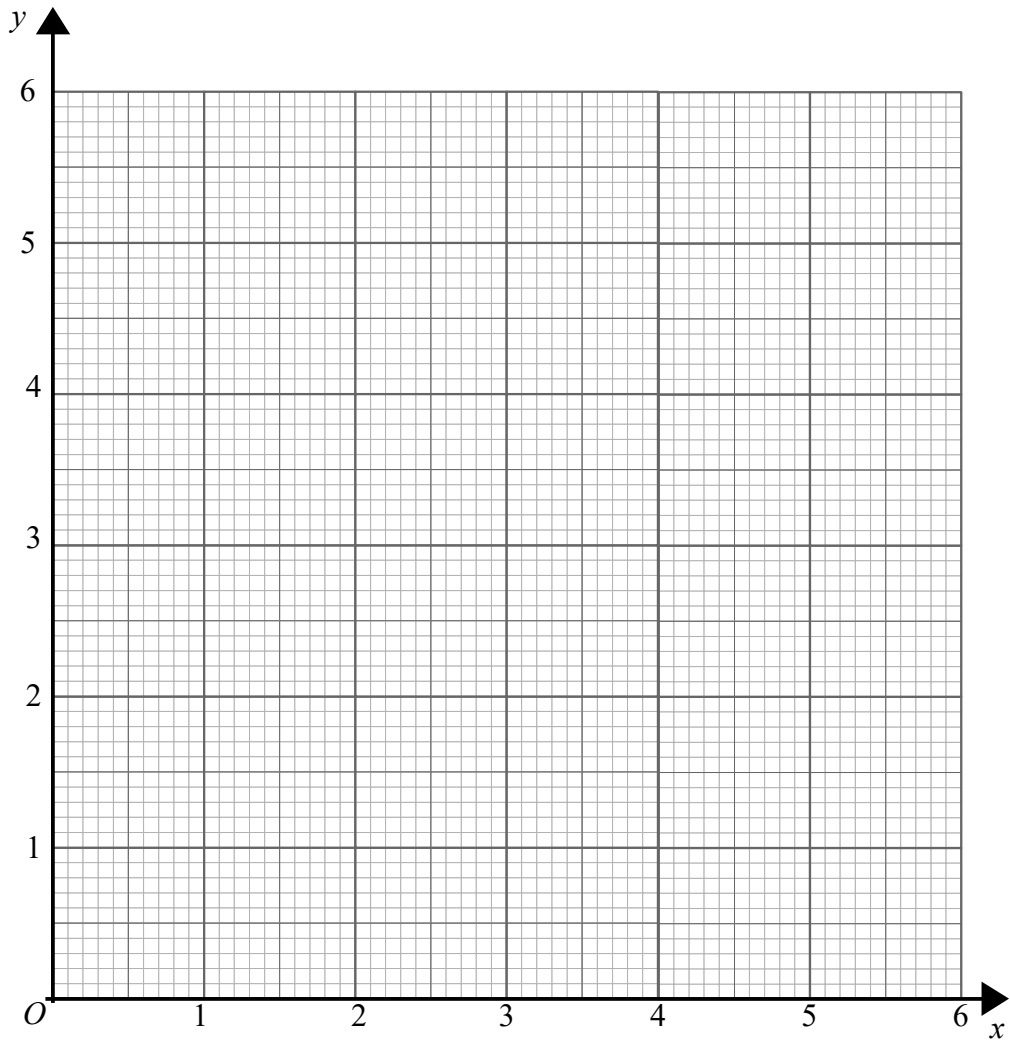
(Total for Question 6 is 4 marks)

7 (a) Complete the table of values for  $y = x + \frac{1}{x}$

$x$	0.2	0.4	0.6	0.8	1	2	4	5
$y$								

(2)

(b) On the grid, draw the graph of  $y = x + \frac{1}{x}$



(2)

(Total for Question 7 is 4 marks)