

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

## GCSE (1 – 9)

# Cubic and Reciprocal Graphs

### Instructions

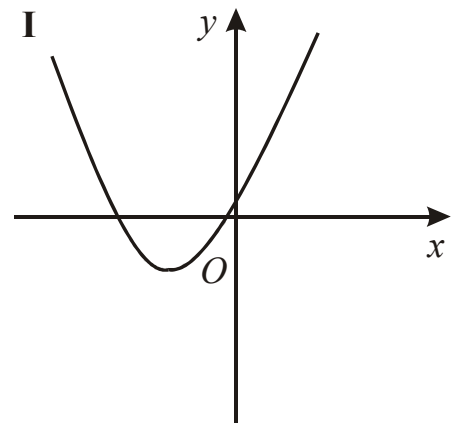
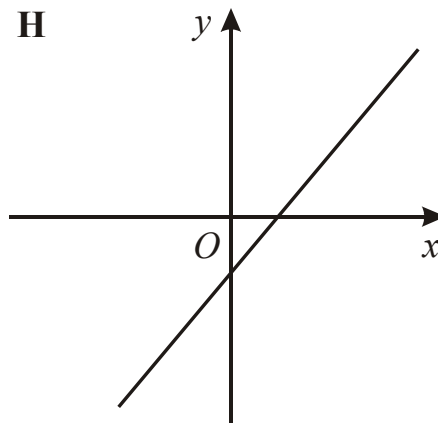
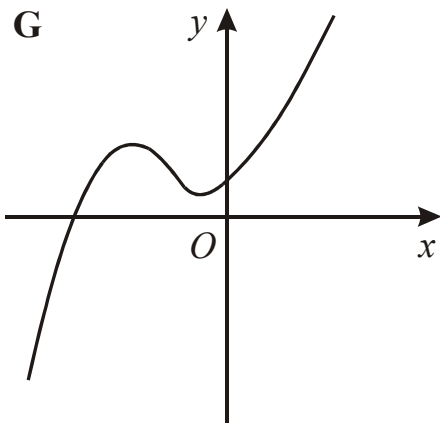
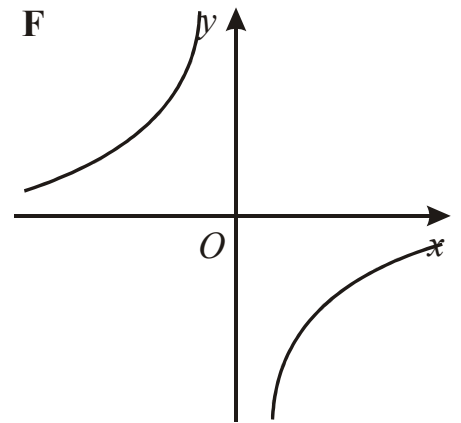
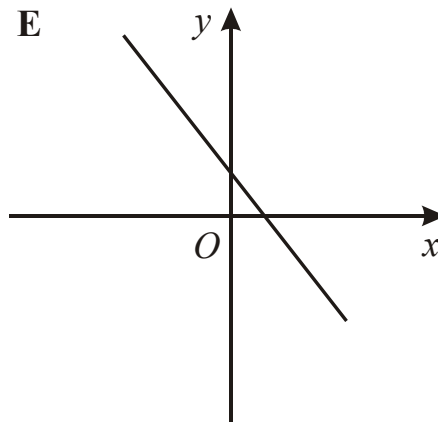
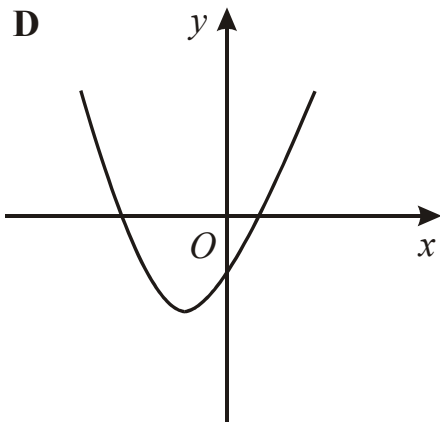
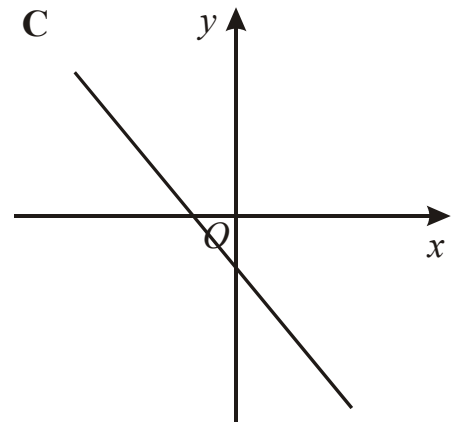
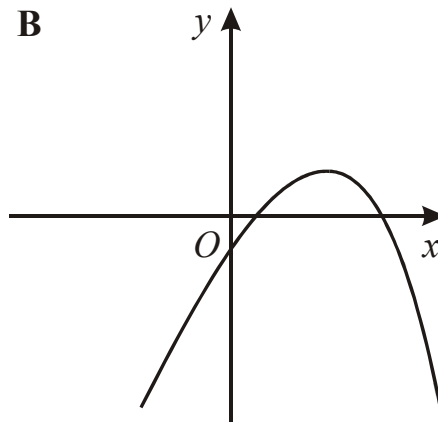
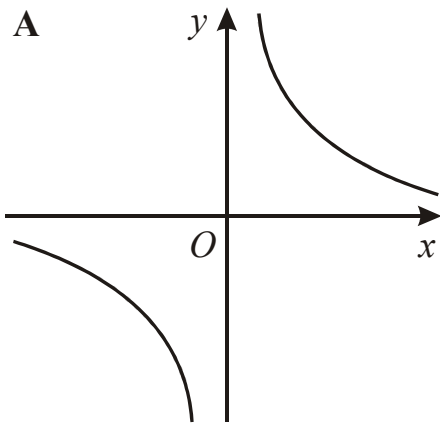
- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

### 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. Write down the letter of the graph which could have the equation

(i)  $y = 3x - 2$  ..... (1)

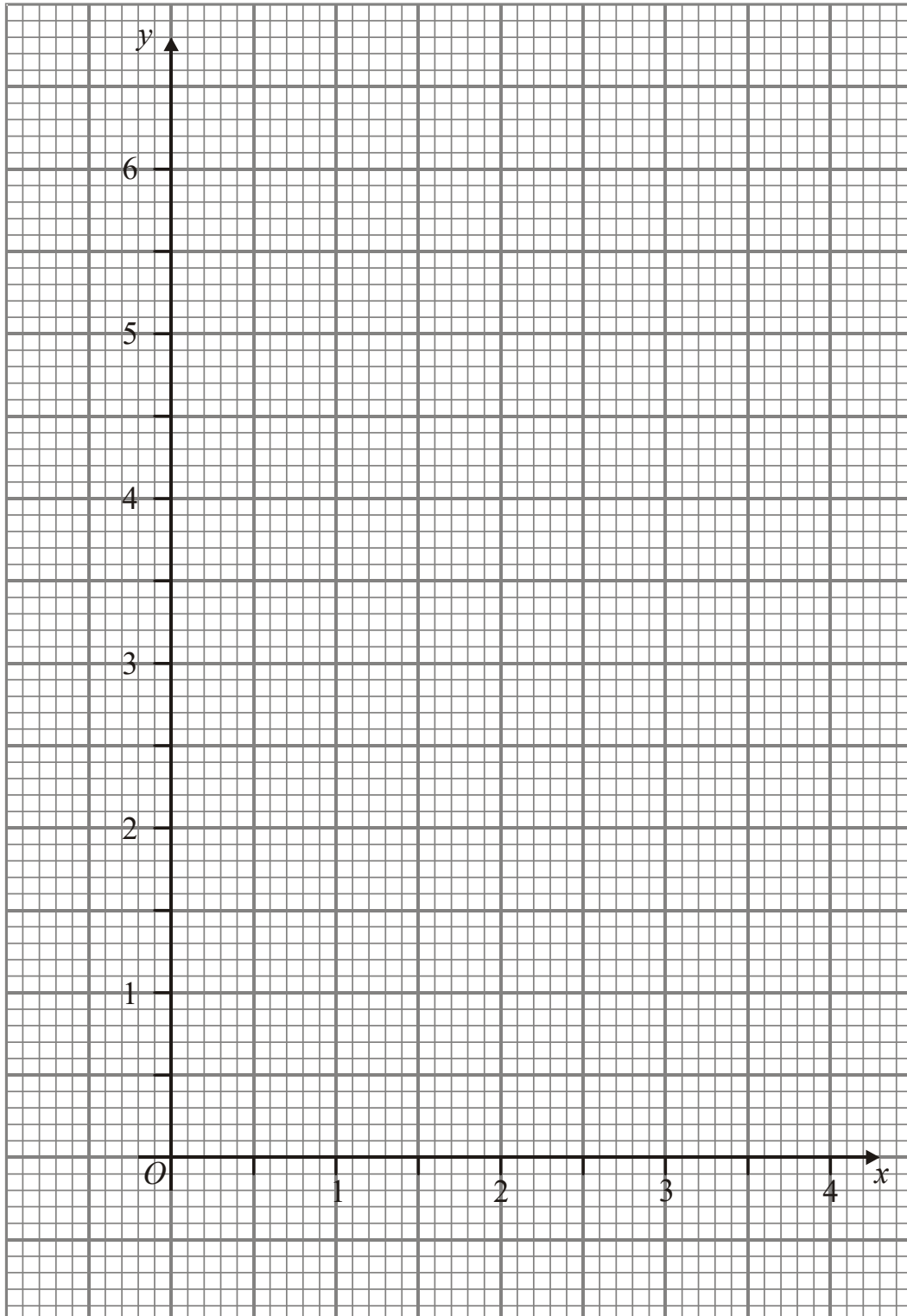
(ii)  $y = 2x^2 + 5x - 3$  ..... (1)

(iii)  $y = \frac{3}{x}$  ..... (1)

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

$x$	0.2	0.4	0.8	1.0	2.0	4.0
$y$	5.0		1.25	1.0		

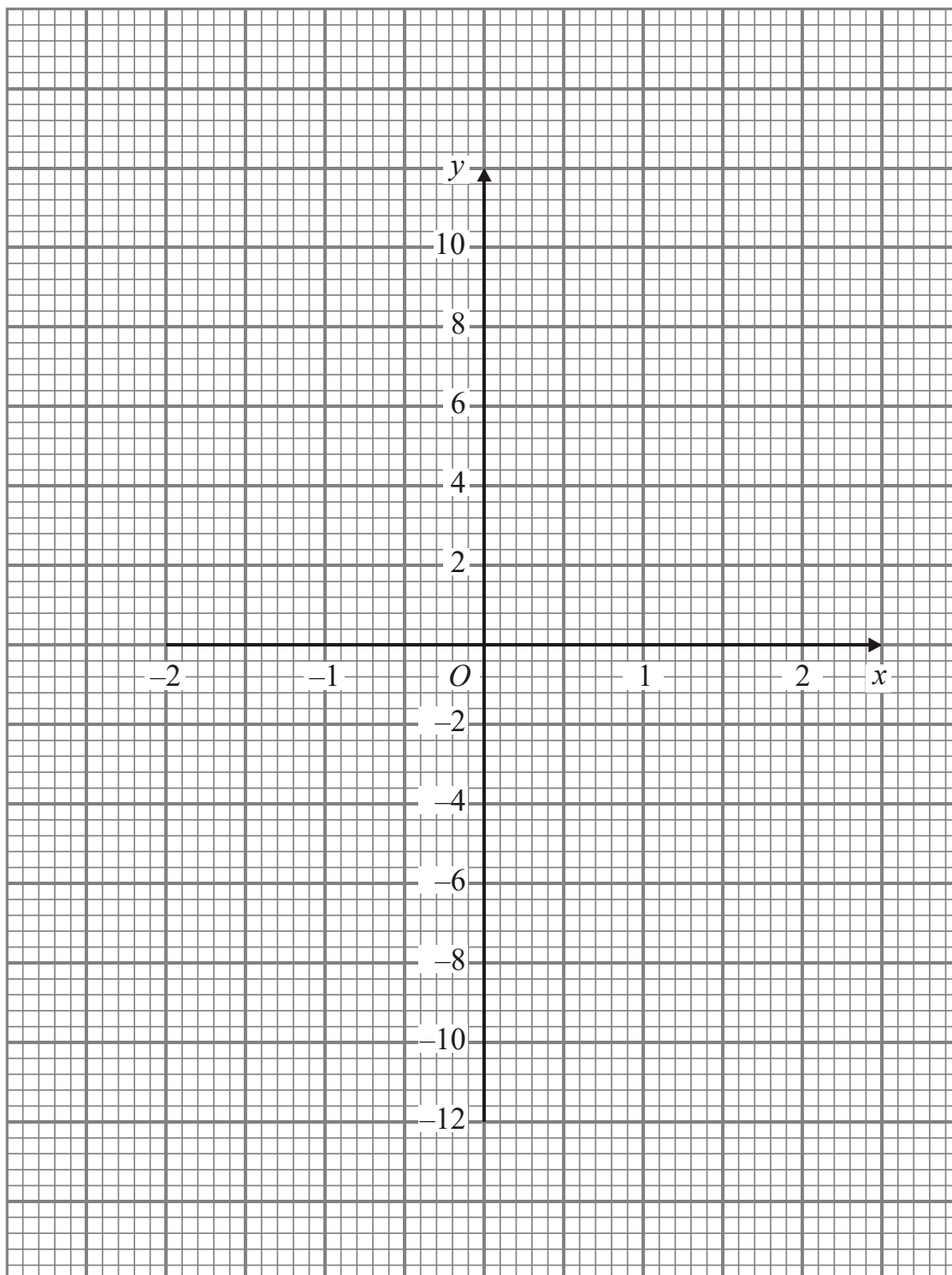
b) On the grid, draw the graph of  $y = \frac{1}{x}$  (2)



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

$x$	-2	-1	0	1	2
$y$	-12			0	

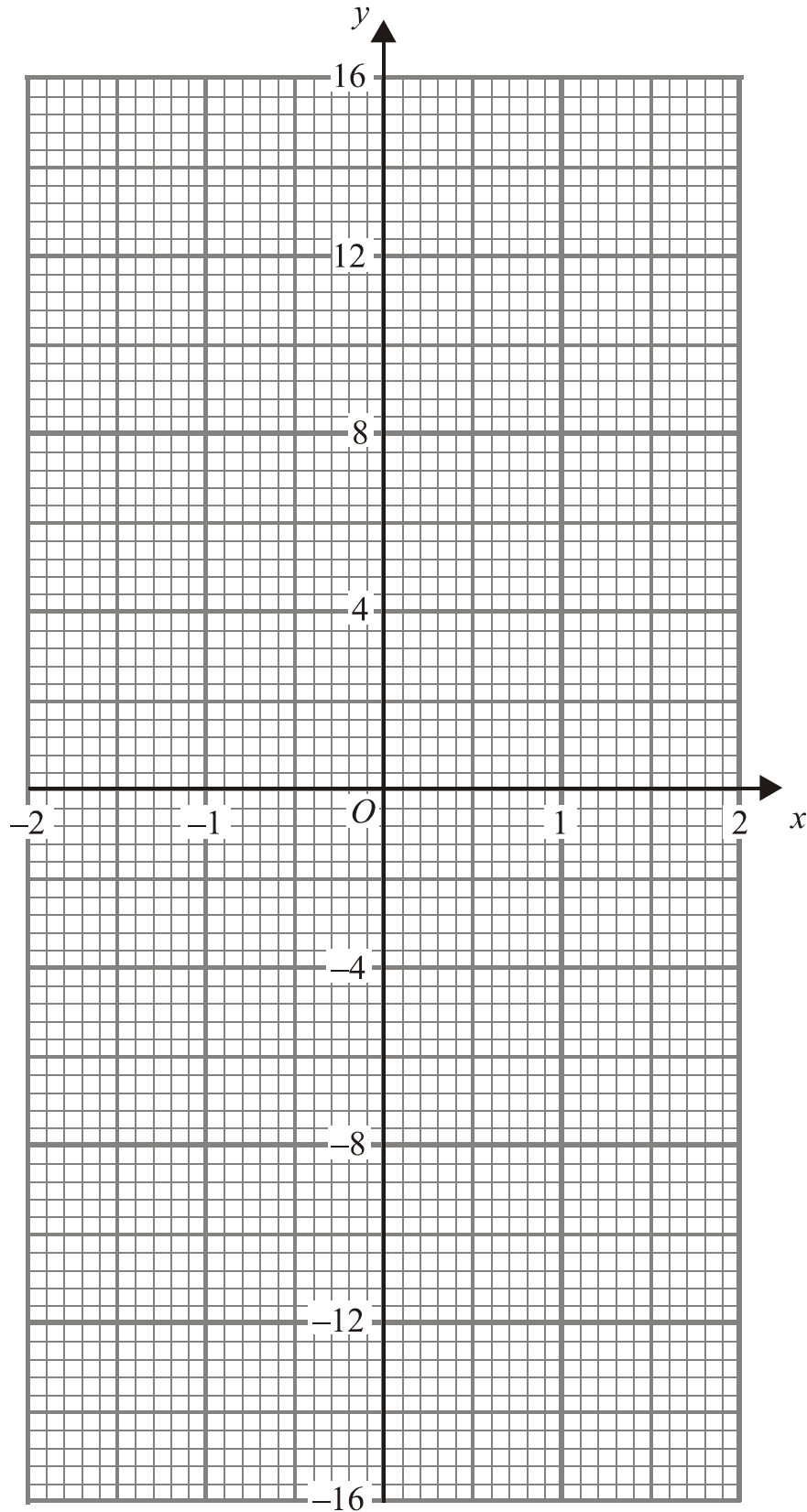
b) On the grid, draw the graph of  $y = x^3 + x - 2$



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

$x$	-2	-1	0	1	2
$y$	-14		0		

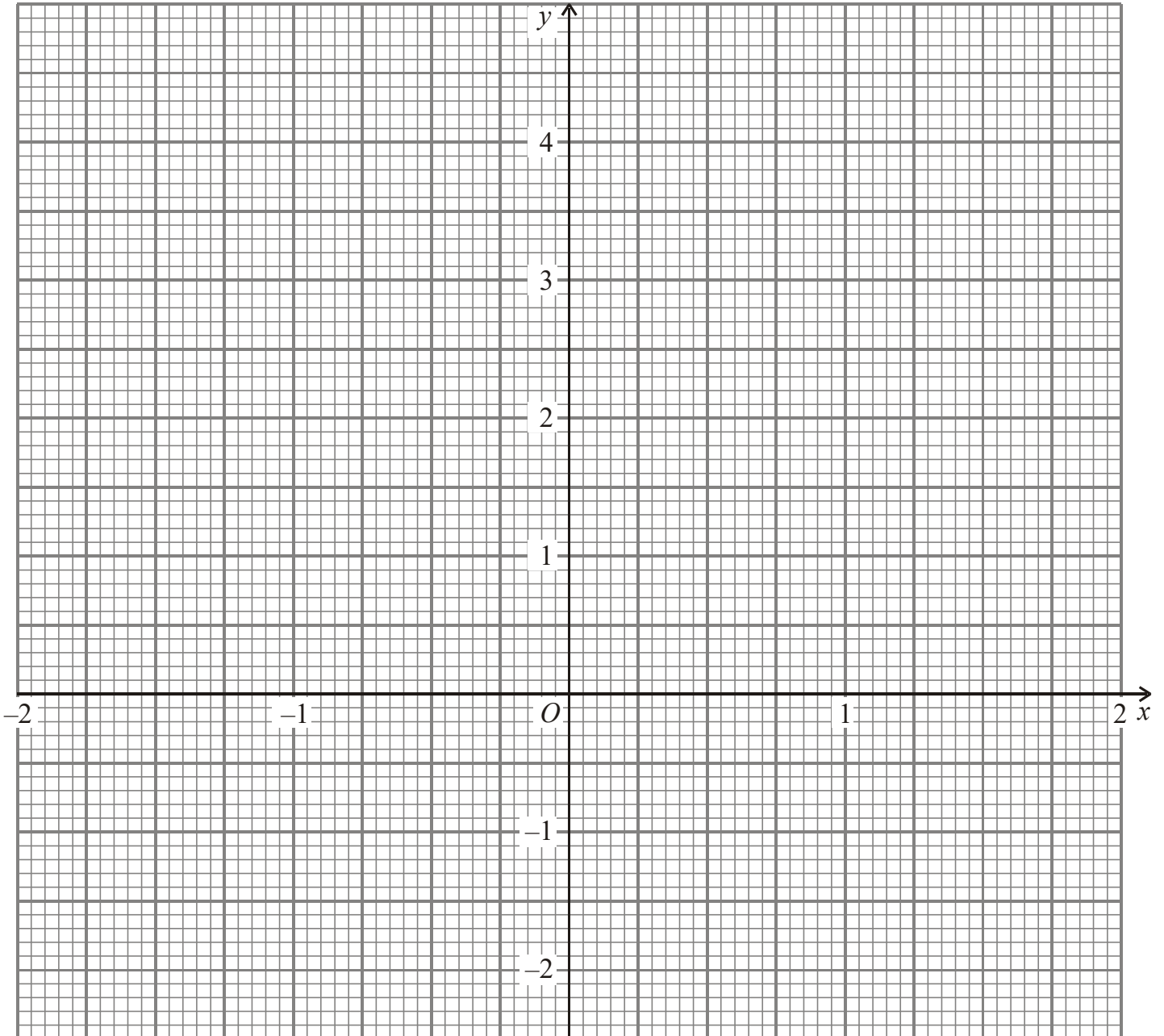
b) On the grid, draw the graph of  $y = x^3 + 3x$  (2)



5.(a) Complete the table of values for  $y = x^3 - 3x + 1$  (2)

$x$	-2	-1.5	-1	-0.5	0	0.5	1	1.5	2
$y$	-1		3	2.375	1	-0.375		-0.125	3

b) On the grid, draw the graph of  $y = y = x^3 - 3x + 1$  (2)



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

$x$	0.2	0.4	0.6	0.8	1	2	4	5
$y$	5.2				2		4.25	5.2

b) On the grid, draw the graph of  $y = x + \frac{1}{x}$  (2)

