

Name: _____

GCSE (1 – 9)

Cubic and Reciprocal Graphs

Instructions

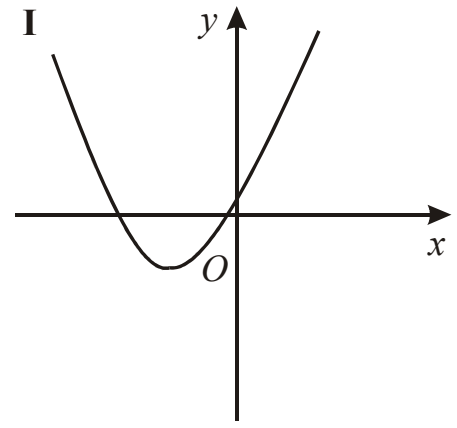
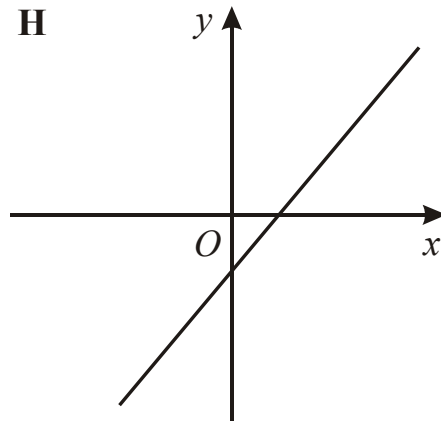
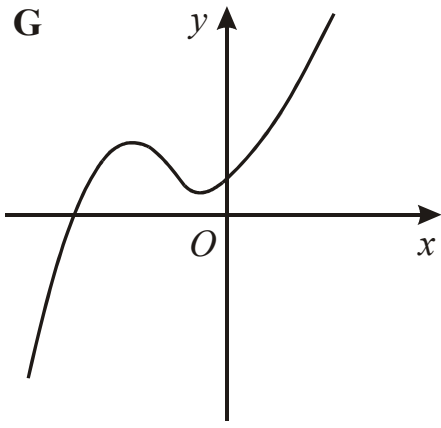
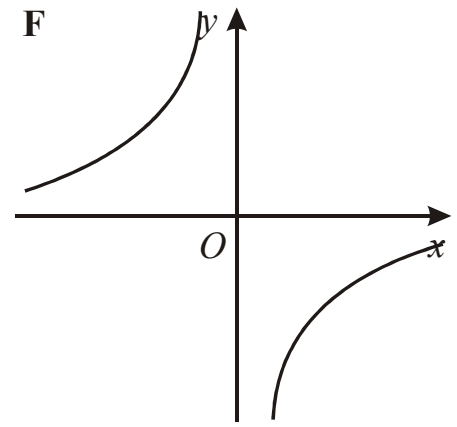
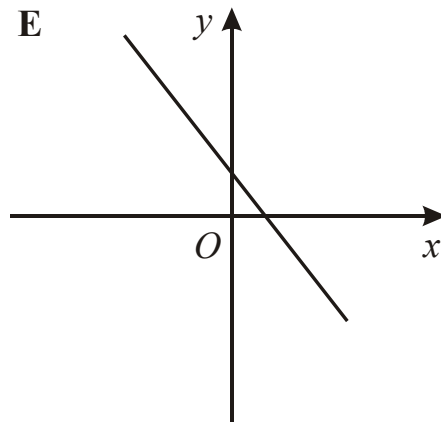
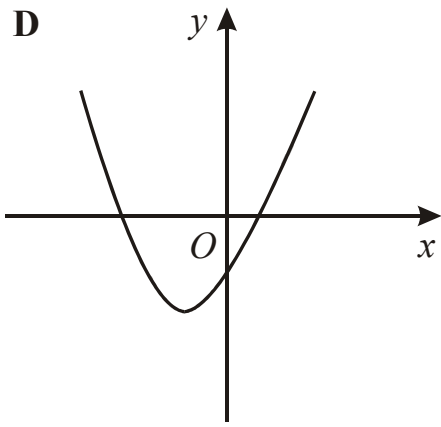
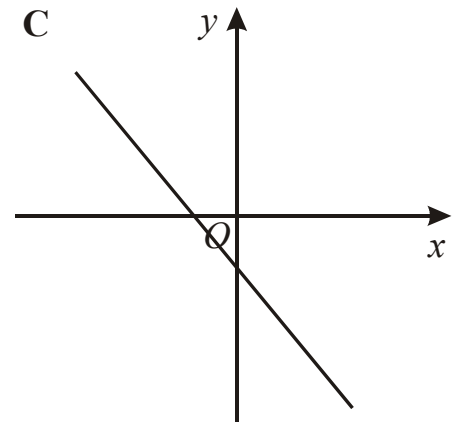
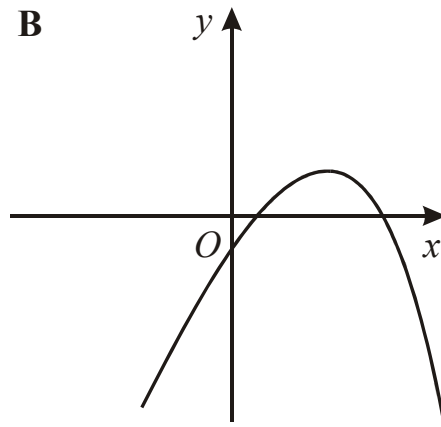
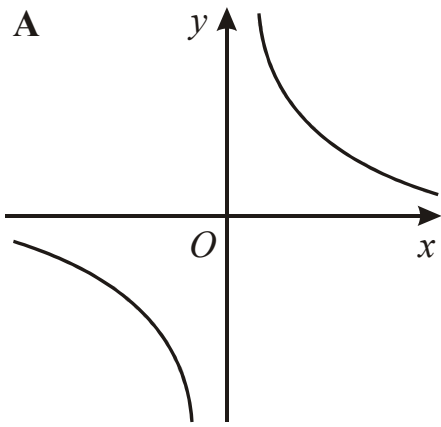
- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

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)

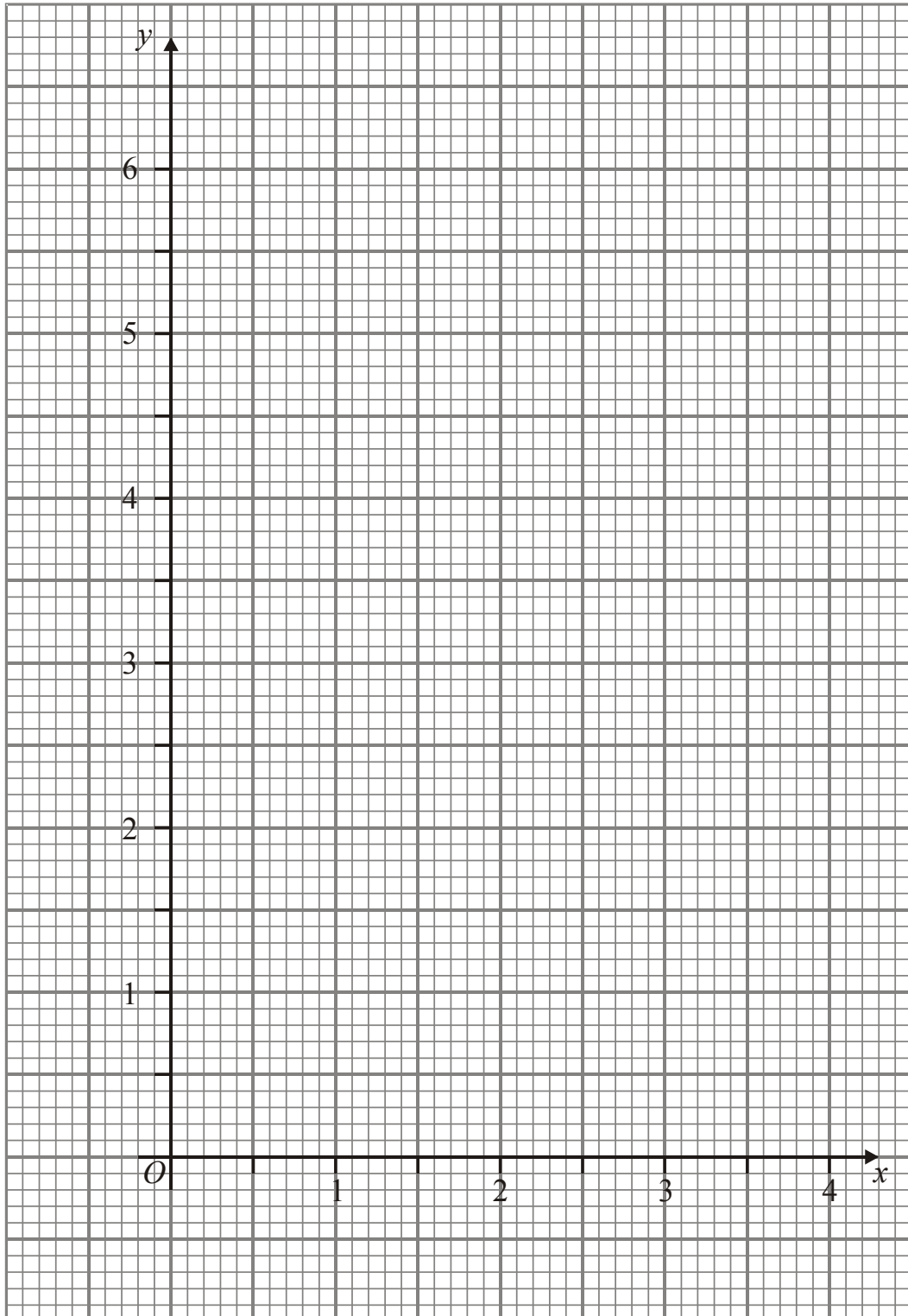
(ii) $y = 2x^2 + 5x - 3$ (1)

(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		

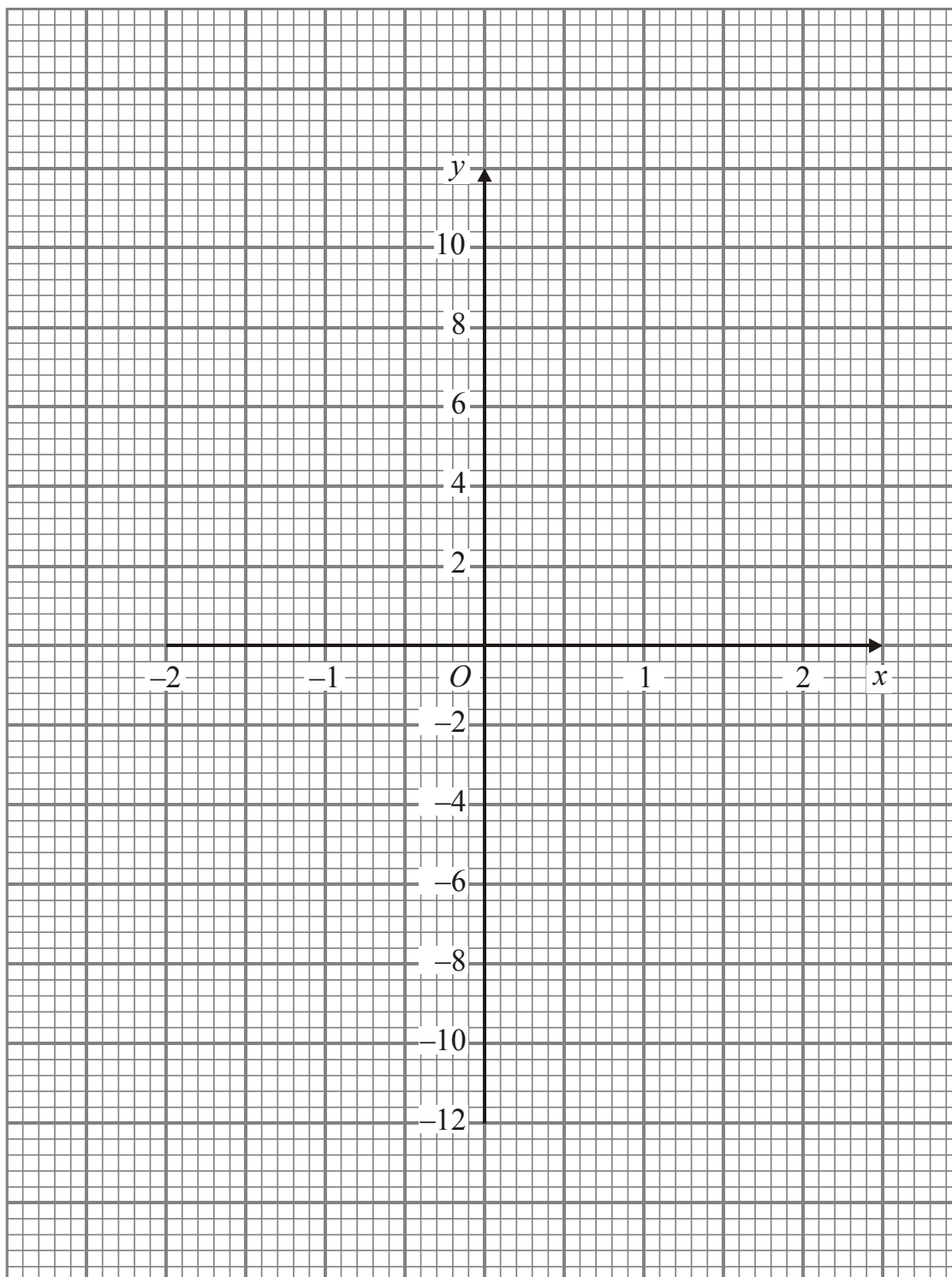
b) On the grid, draw the graph of $y = \frac{1}{x}$ (2)



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

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

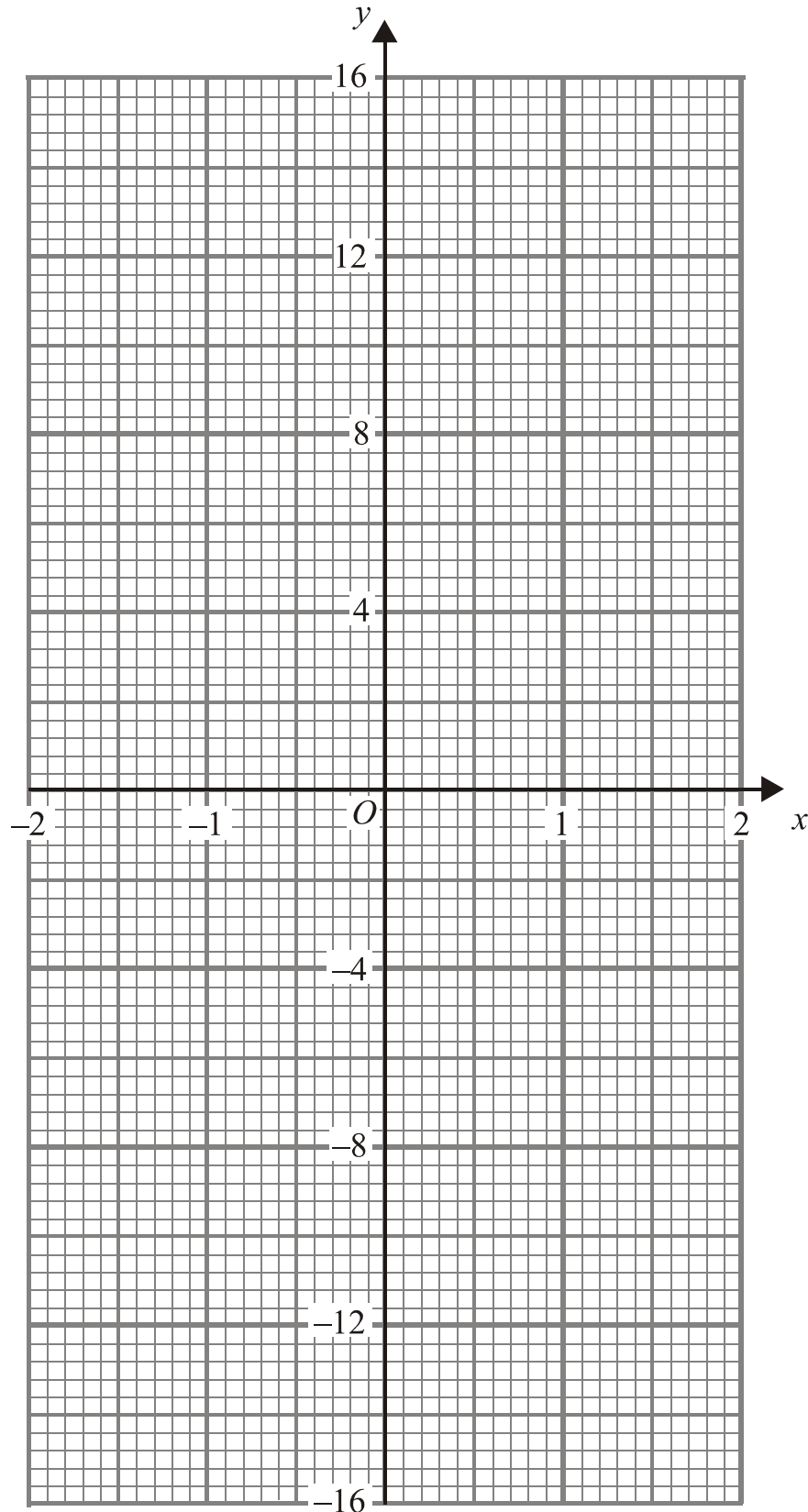
b) On the grid, draw the graph of $y = y = x^3 + x - 2$



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

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

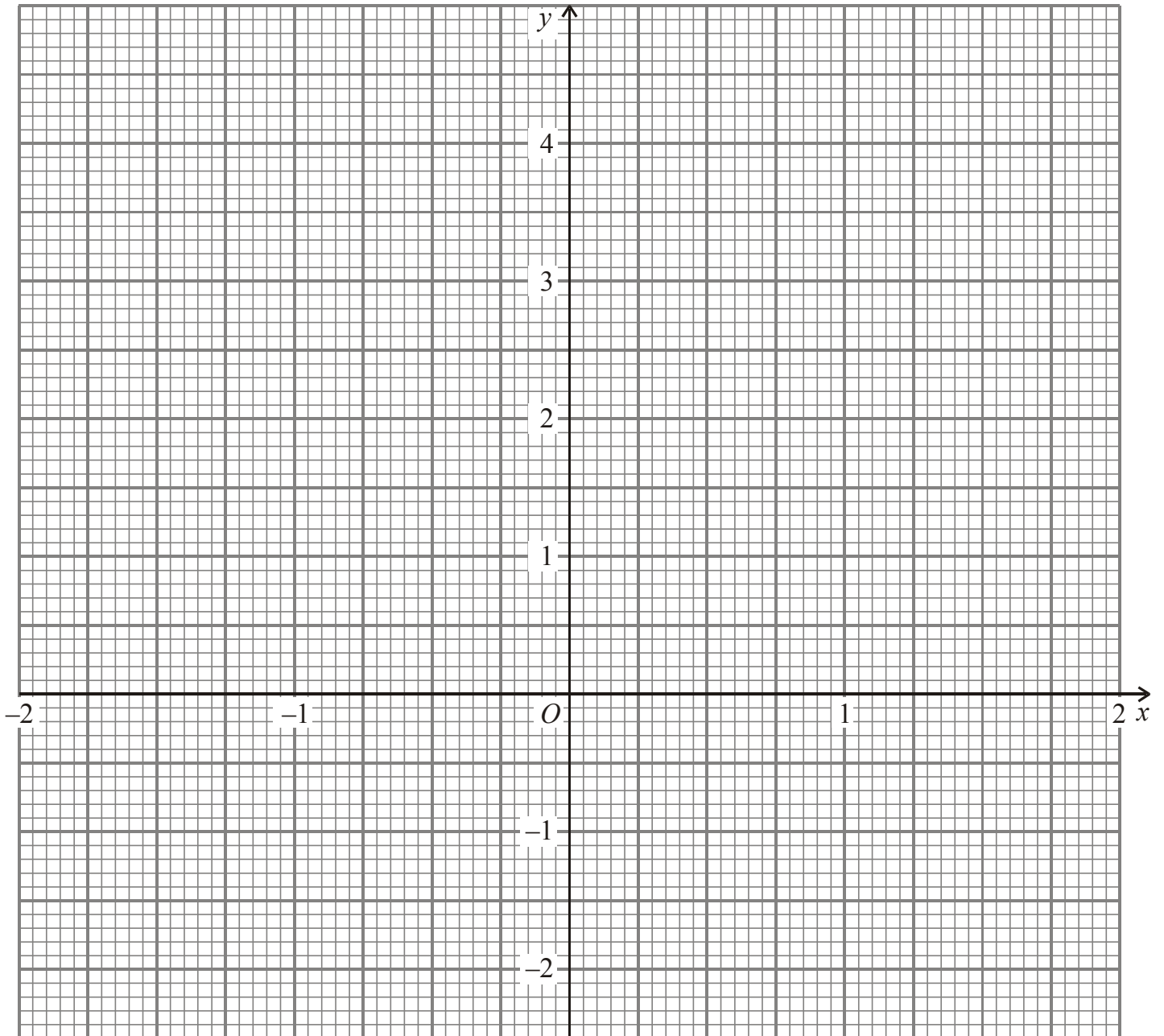
b) On the grid, draw the graph of $y = y = x^3 + 3x$ (2)



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)

