A065 Cubic and reciprocal graphs

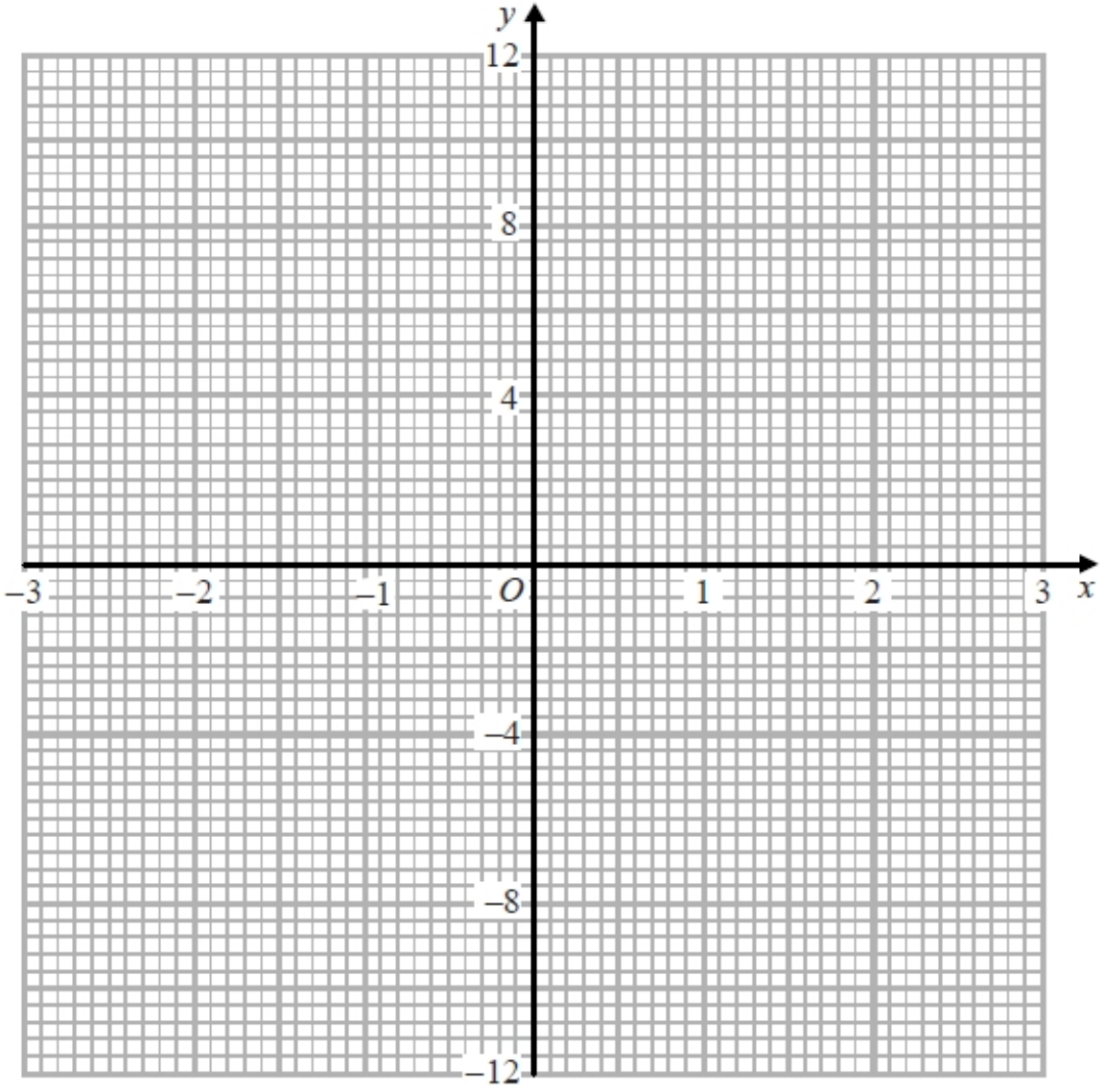
Q1.

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

x	–3	–2	–1	0	1	2
y		1	3		1	

(2)

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



(2)

(Total for question = 4 marks)

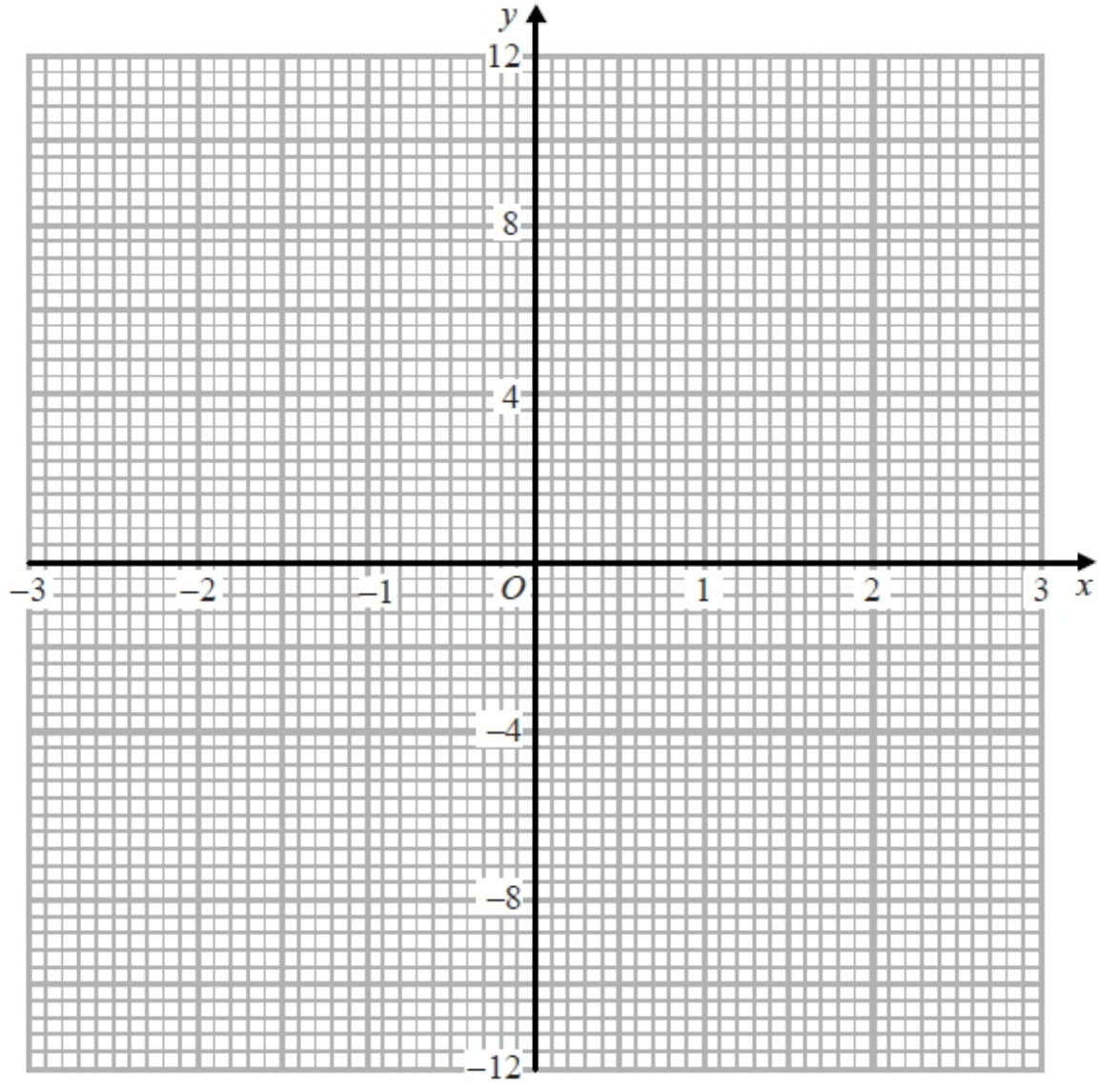
Q2.

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

x	–3	–2	–1	0	1	2
y						

(2)

(b) On the grid, draw the graph of $y = -x^3 + 5$ for values of x from –3 to 2



(2)

(Total for question = 4 marks)

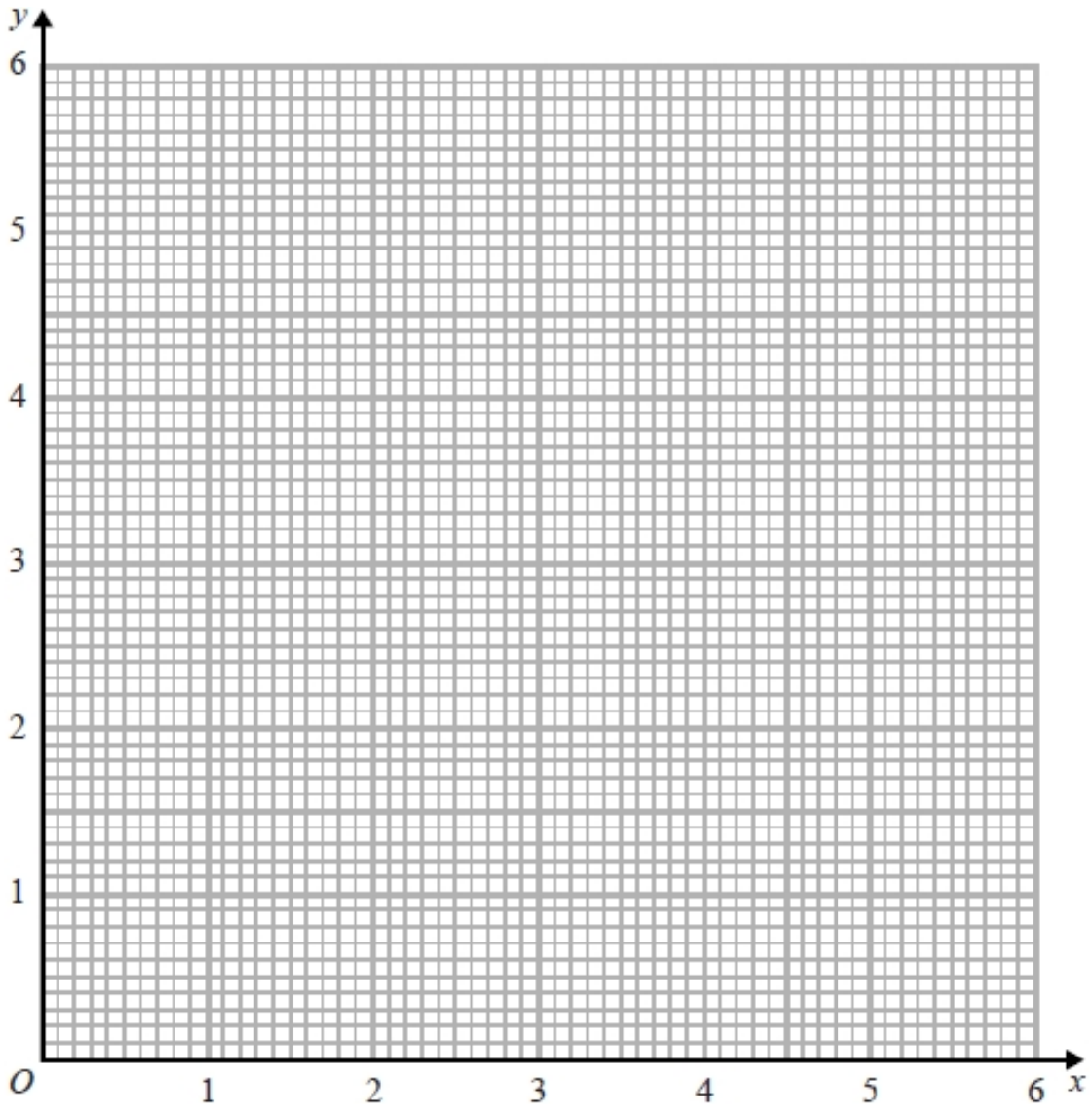
Q3.

(a) Complete the table of values for $y = \frac{3}{x}$

x	0.5	1	2	3	4	5	6
y		3	1.5		0.75		

(2)

(b) On the grid, draw the graph of $y = \frac{3}{x}$ for values of x from 0.5 to 6



(2)

(Total for question = 4 marks)

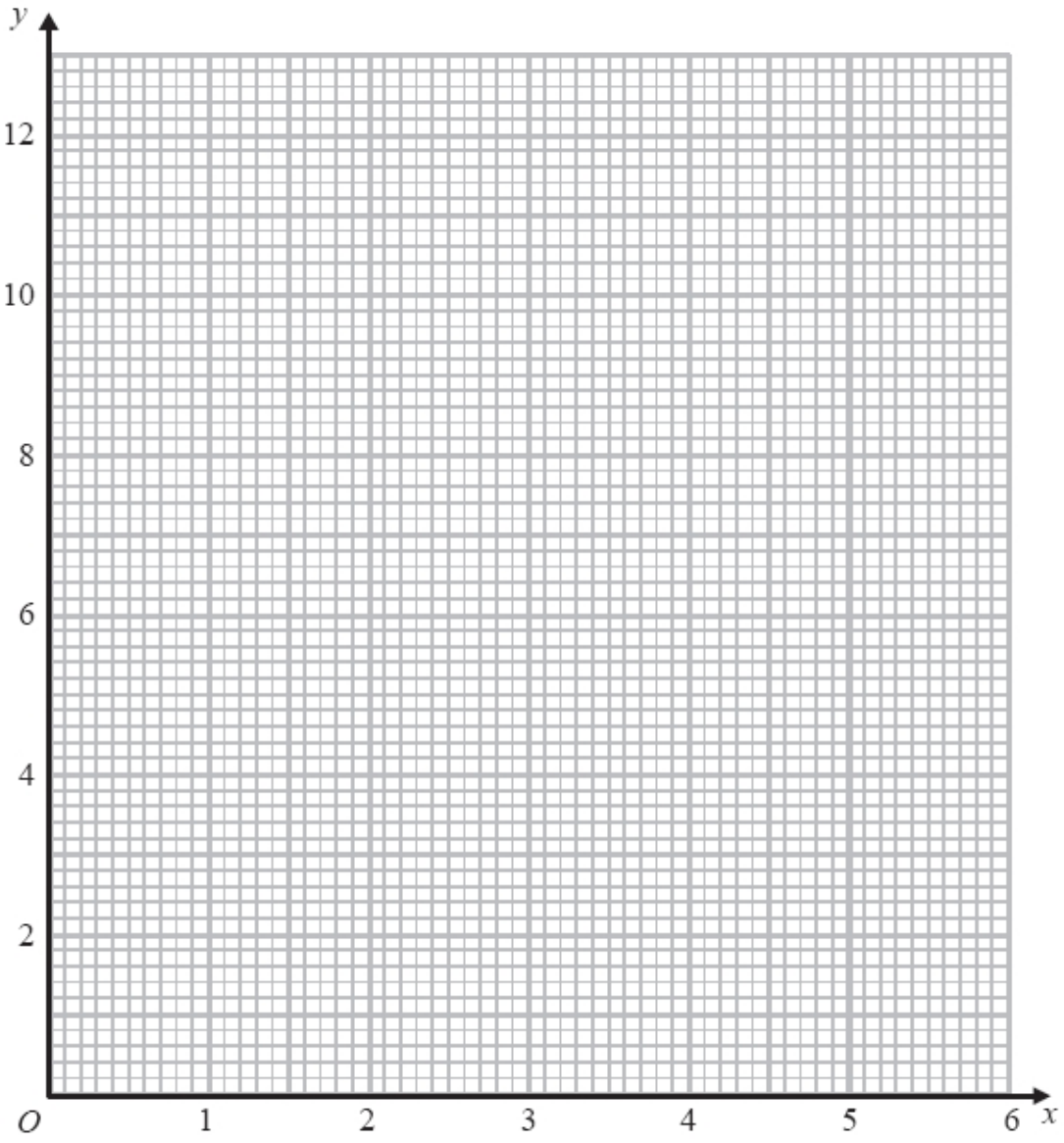
Q4.

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

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

(2)

(b) On the grid below, draw the graph of $y = \frac{6}{x}$ for values of x from 0.5 to 6

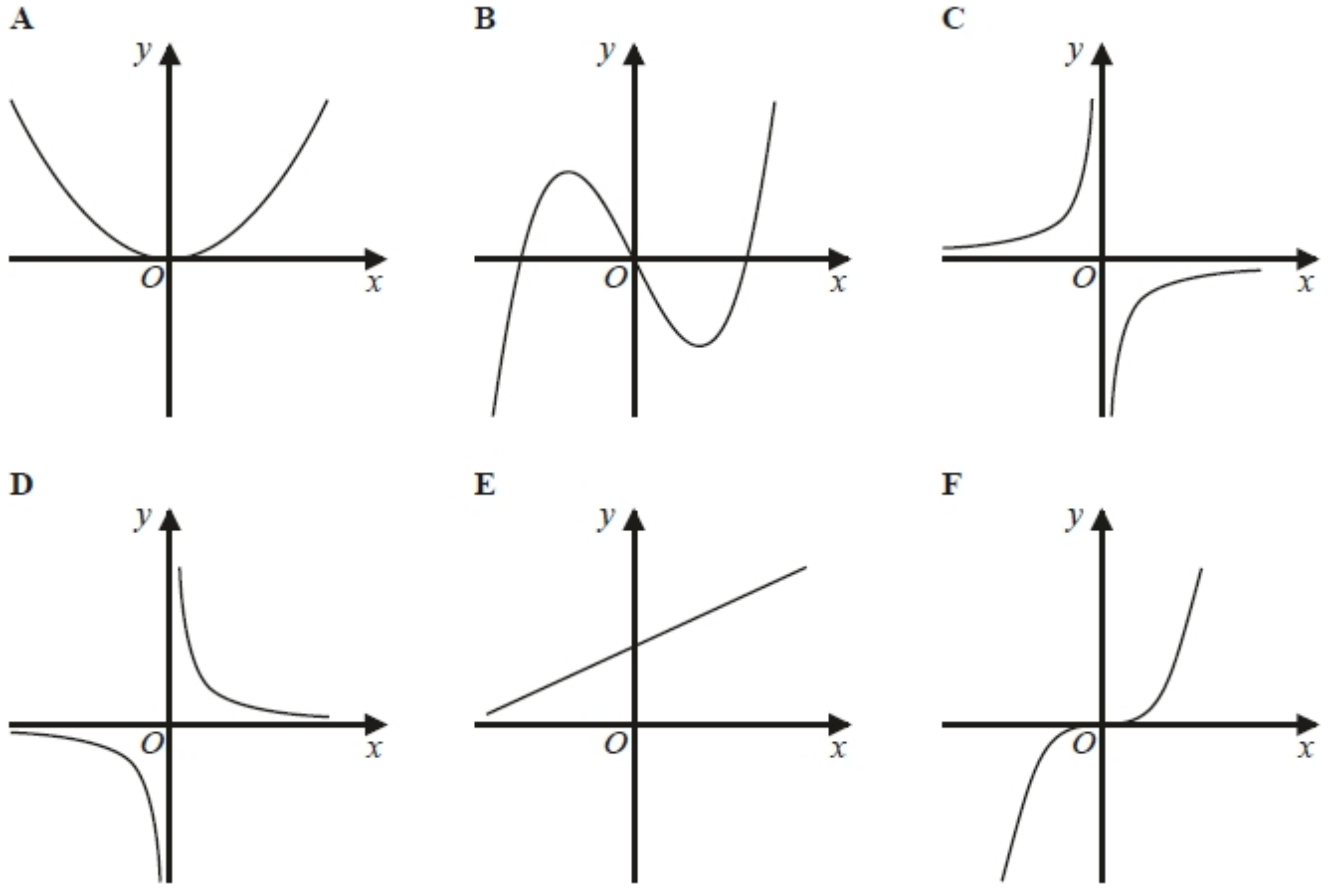


(2)

(Total for question = 4 marks)

Q5.

Here are six graphs.



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

(a) $y = x^3$

.....

(1)

(b) $y = \frac{1}{x}$

.....

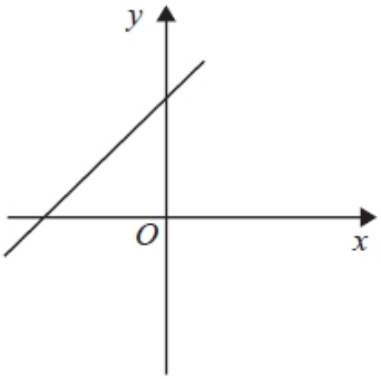
(1)

(Total for question = 2 marks)

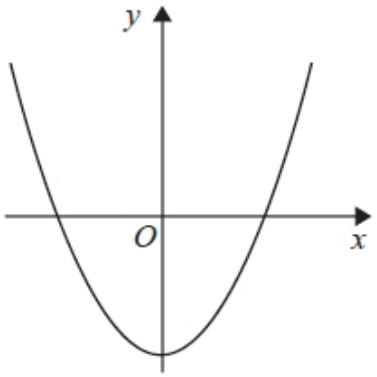
Q6.

Here are four graphs.

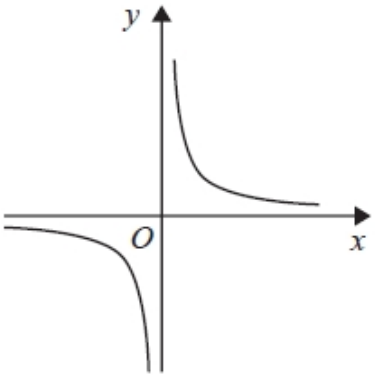
Graph A



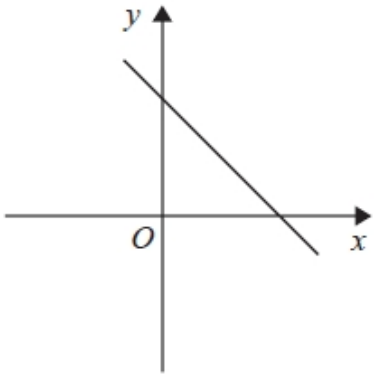
Graph B



Graph C



Graph D



Each of the equations in the table is the equation of one of the graphs.

Complete the table.

Equation	Letter of graph
$y = x^2 - 7$	
$y = 3 - 2x$	
$y = 2x + 3$	
$y = \frac{1}{x}$	

(Total for question = 2 marks)