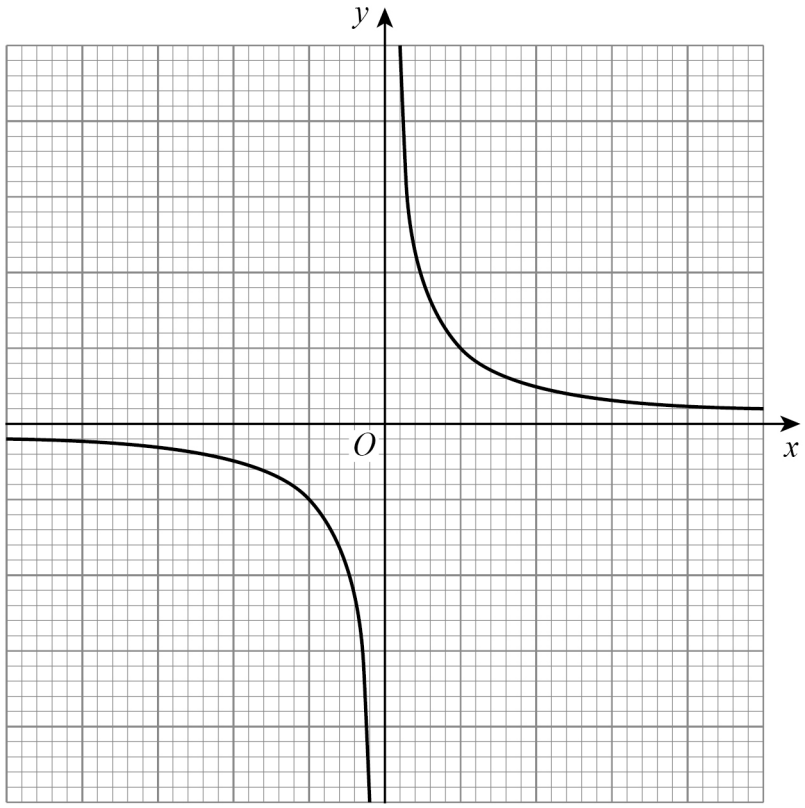
1 Here is the sketch of a graph.



Circle the equation of the graph.

[1 mark]

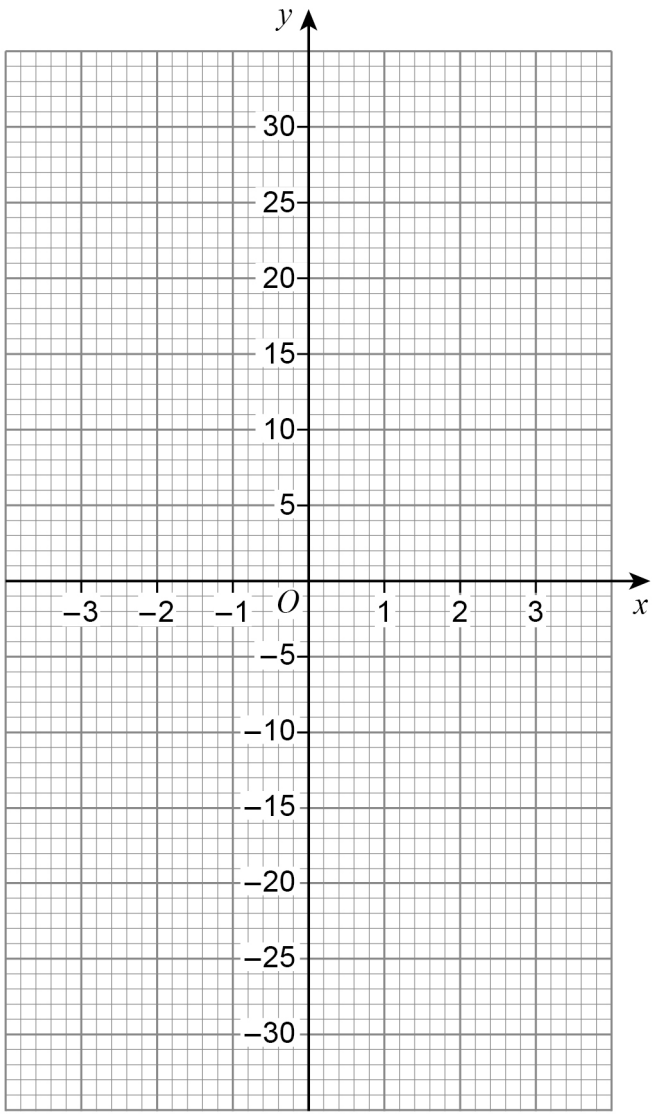
$y = x$ $y = -x^2$ $y = -x^3$ $y = \frac{1}{x}$

2 A graph has equation $y = x^3 + a$ where a is an integer.

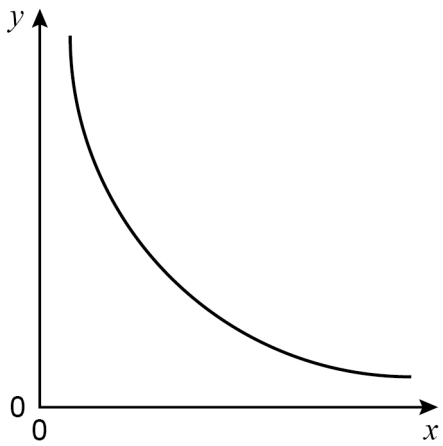
The graph passes through the point (3, 29)

Draw the graph for values of x from –3 to 3

[3 marks]



3 Here is a sketch of a graph.



Circle the equation of the graph.

k is a constant.

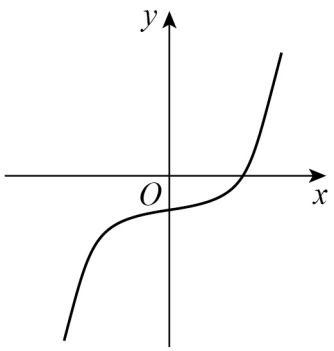
[1 mark]

$y = kx$ $y = k + x$ $y = k - x$ $y = \frac{k}{x}$

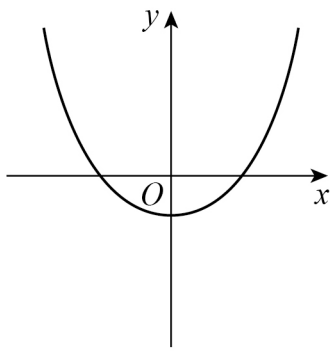
4 Circle the letter of the possible sketch graph of $y = x^3 - 4$

[1 mark]

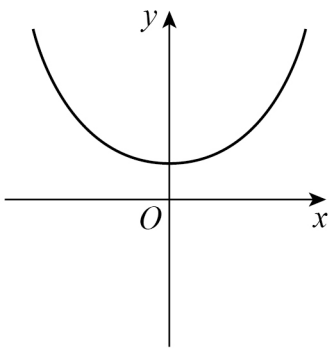
A



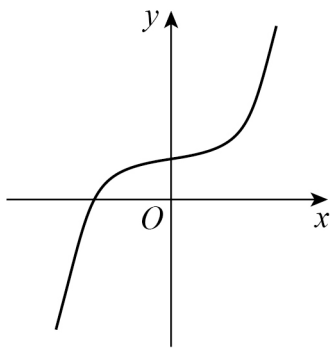
B



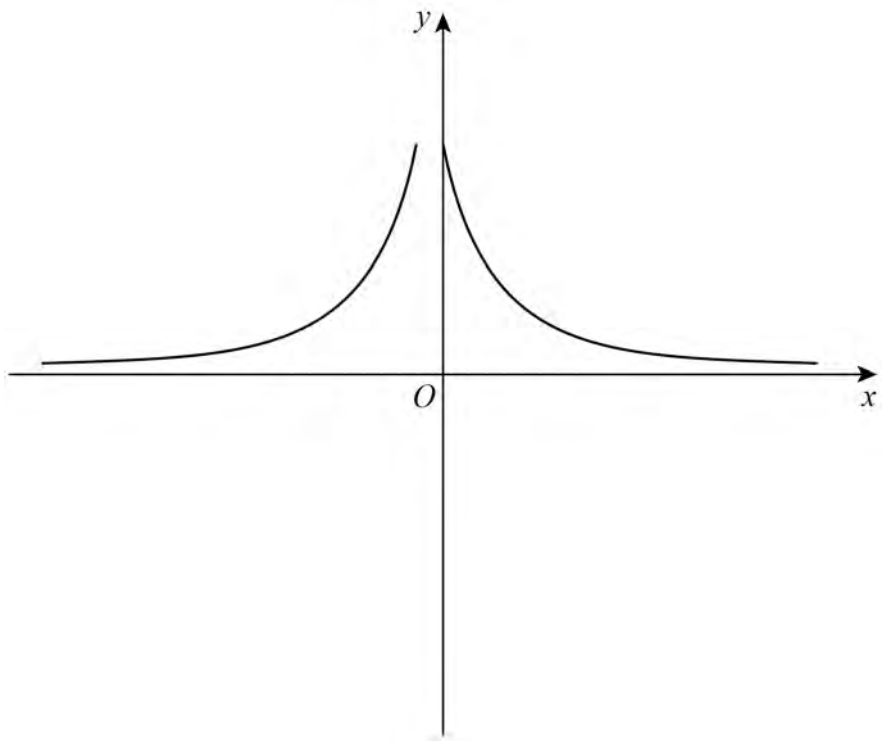
C



D



5 Erika tries to sketch the graph $y = \frac{1}{x}$ with $x \neq 0$



Make **two** different criticisms of her sketch.

[2 marks]

Criticism 1 _____

_____

_____

Criticism 2 _____

_____

_____

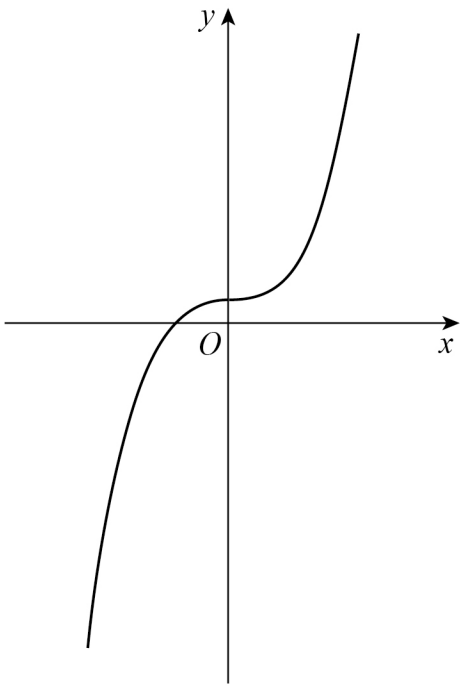
6 (a) Sunil thinks that E and D are linked by the equation $E = \frac{36}{D}$

The graph shows the values of D and E for $2 \leqslant D \leqslant 6$

Choose **one** point on the graph and state if Sunil's equation is correct for that point.

[1 mark]

7 Here is a sketch of a graph.



Circle the possible equation of the graph.

[1 mark]

$y = x^2 + 1$ $y = \frac{1}{x} + 1$ $y = x^3 + 1$ $y = 1 - x^2$