5.10 Drawing Other Graphs: Cubic/Reciprocal: 10-minute Pack

Total Marks

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out the value of y when y = 1/x and x = 4.

(Total for Question 1 is 1 mark)

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2 Complete the table for y = 1/x. Give exact values as fractions where appropriate.

(a) x = -2, y = ____ **(1)**

(b) x = 1, y = ____ **(1)**

(Total for Question 2 is 2 marks)

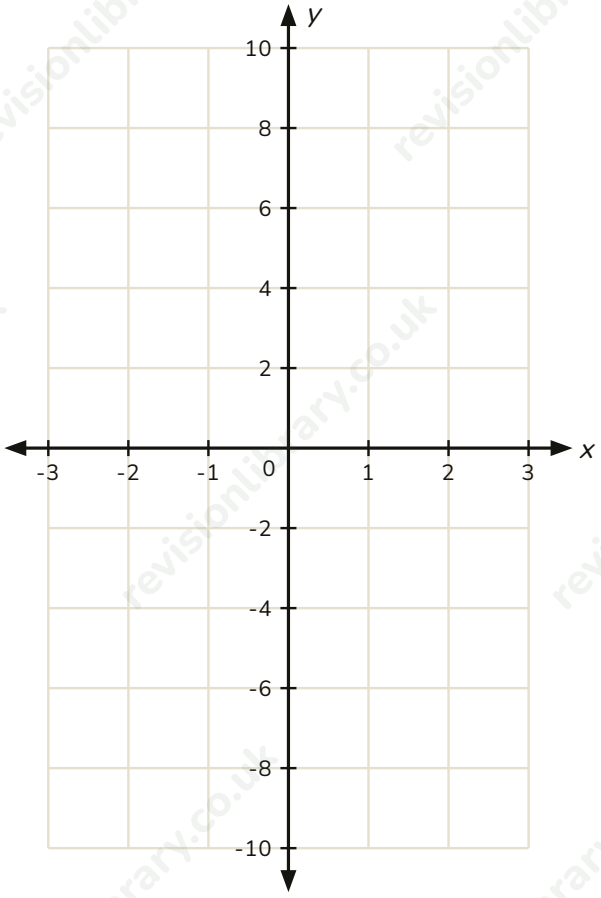
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3 Solve the equation $x^3 = 27$. Give the value of x.

(Total for Question 3 is 1 mark)

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4 The graph of $y = x^3$ is to be drawn for $-2 \leq x \leq 2$.



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

x	-2	-1	0	1	2
y	-8	_	0	_	8

(b) On the grid, plot the points from your table and join them with a smooth curve. **(2)**

(c) Write down the coordinates of the point where the curve crosses the y-axis. **(1)**

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(Total for Question 4 is 5 marks)

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Mark scheme · 5.10 Drawing Other Graphs: Cubic/Reciprocal: 10-minute Pack

Question 1

1/4 or 0.25 cao **B1**

Answer: 1/4 or 0.25

Question 2

(a) -1/2 cao **B1**

(a) Answer: -1/2

(b) 1 cao **B1**

(b) Answer: 1

Question 3

3 cao **B1**

Answer: 3

Question 4

(a) y = -1 at x = -1 **B1**

(a) y = 1 at x = 1 **B1**

(a) Answer: x=-1: -1, x=1: 1

(b) all 5 points plotted correctly ft from table **B1**

(b) smooth s-shaped curve drawn through all points, not a series of straight lines **B1**

(b) Answer: Smooth increasing s-shaped curve through the 5 points

(c) (0, 0) cao **B1**

(c) Answer: (0, 0)

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