THIRD SPACE LEARNING

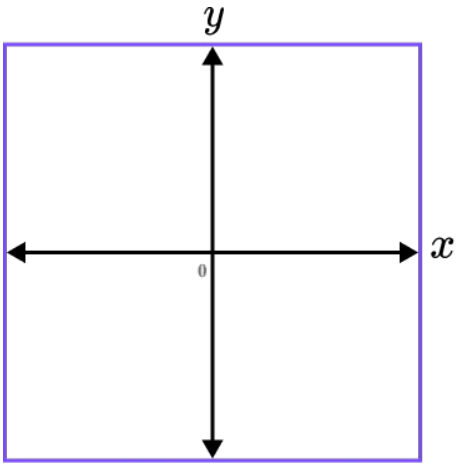
GCSE Exam Questions

Sketching Graphs | Algebra

GCSE Exam Questions: Sketching Graphs

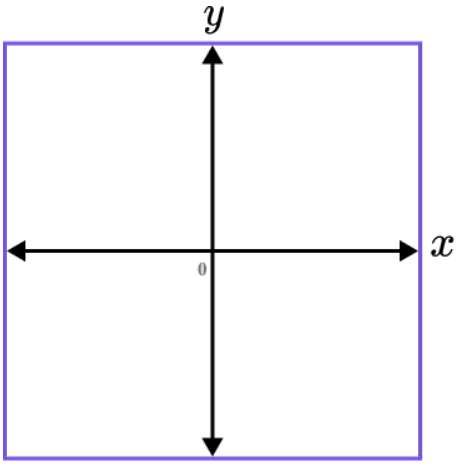
1) Sketch the graph of $y = x^2 + 3x - 4$.

Show clearly values of where the graph crosses the axes.



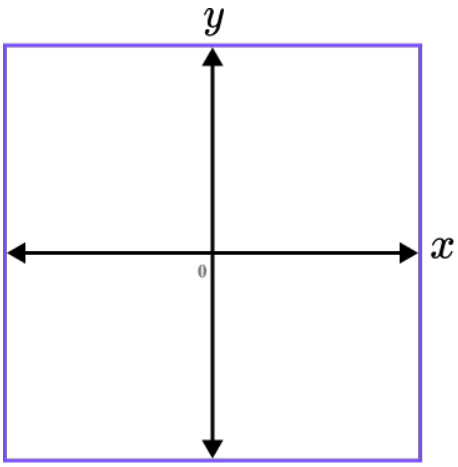
(4 marks)

2) (a) Sketch a graph on the axes below that shows the function $y = x^3$.



(2)

(b) Sketch a graph on the axes below that shows the function $y = x^2$.

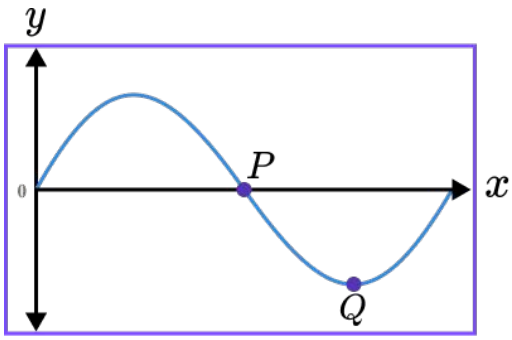


(2)

(4 marks)

GCSE Exam Questions: Sketching Graphs

3) The diagram shows part of a sketch of the function y = sin(x).



(a) Write down the coordinates of the point P.

(1)

(b) Write down the coordinates of the point Q.

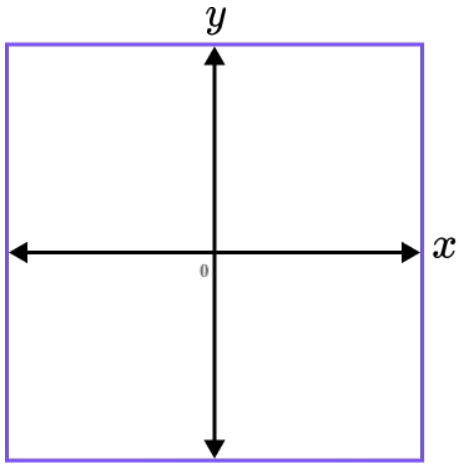
(1)

(2 marks)

GCSE Exam Questions: Sketching Graphs

4) **(a)** The equation of Circle C is $x^2 + y^2 = 16$.

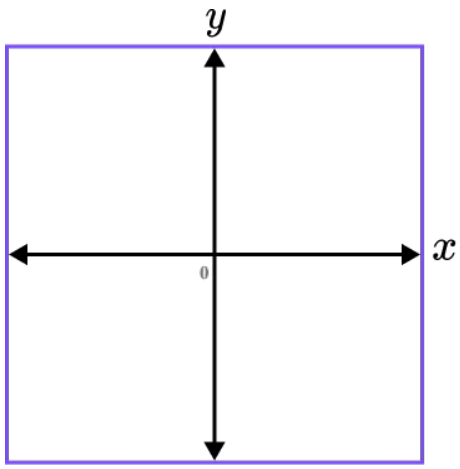
Draw a sketch of circle C.



(2)

(b) The circle C is translated by the vector $\begin{pmatrix} 5 \\ 0 \end{pmatrix}$.

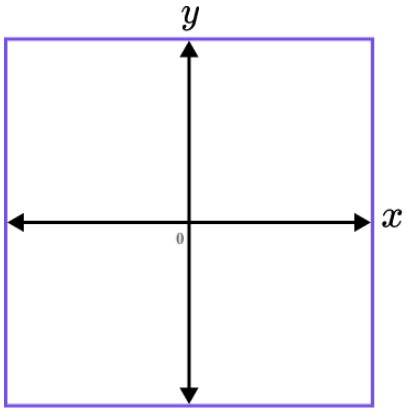
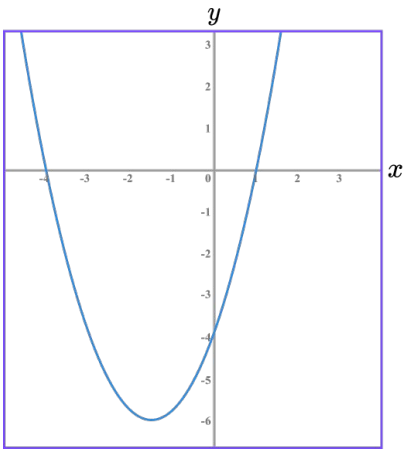
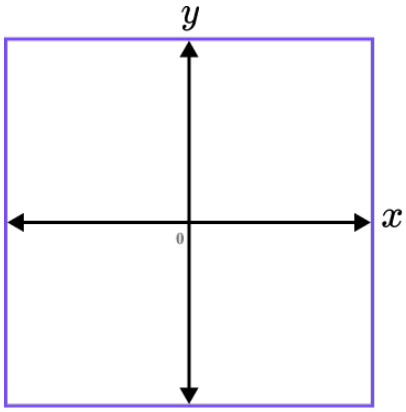
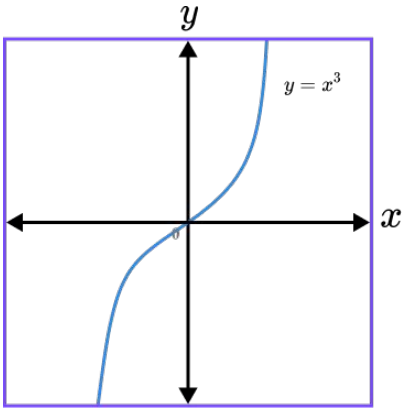
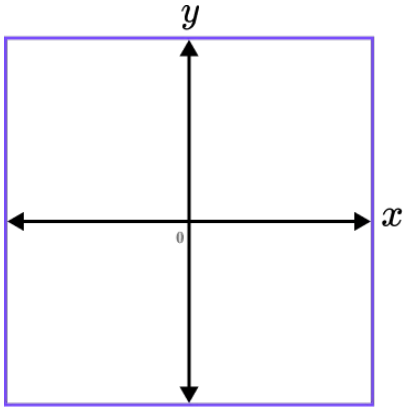
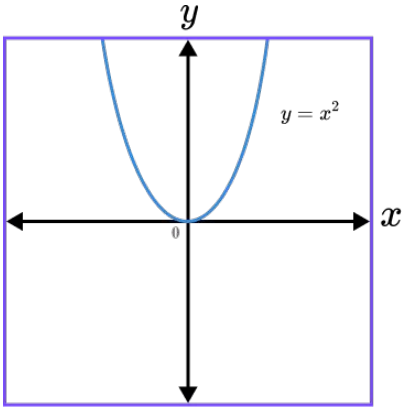
Draw a sketch of circle B.



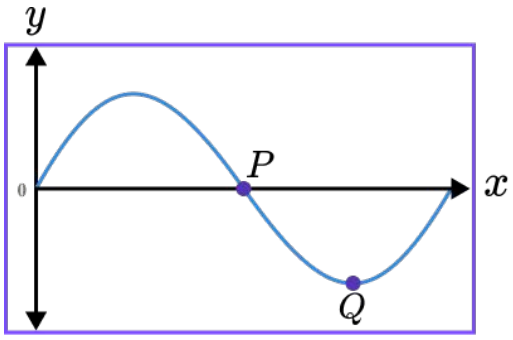
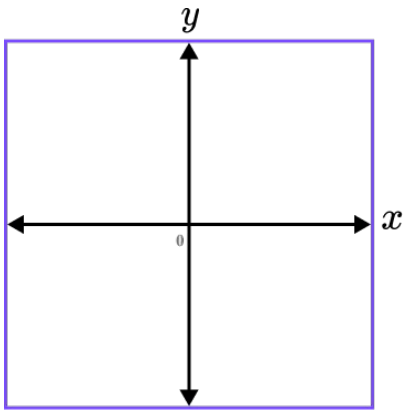
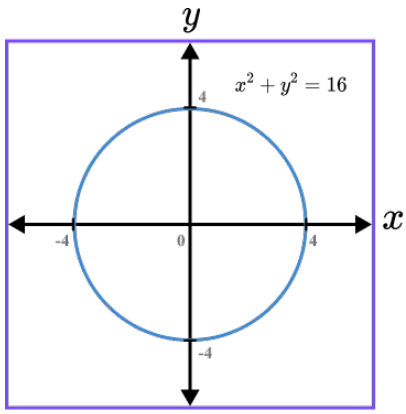
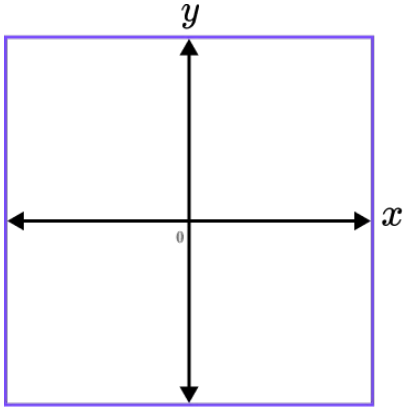
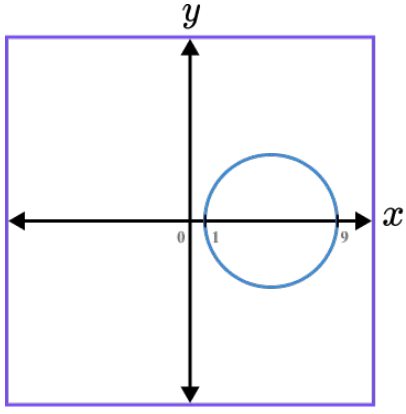
(2)

(4 marks)

GCSE Exam Questions: Sketching Graphs Answers

	Question	Answer	Marks
1)	Sketch the graph of $y = x^2 + 3x - 4$. Show clearly values of where the graph crosses the axes. 	 Parabola shape y-intercept of -4 $y = (x + 4)(x - 1)$ x-intercepts of -4 and 1	 **(1)** **(1)** **(1)** **(1)**
2) (a)	Sketch a graph on the axes below that shows the function $y = x^3$. 	**(a)**  Correct shape A curve that cuts through the origin	 **(1)** **(1)**
(b)	Sketch a graph on the axes below that shows the function $y = x^2$. 	**(b)** Correct shape A curve that cuts through the origin 	**(1)** **(1)**

GCSE Exam Questions: Sketching Graphs Answers

	Question	Answer	Marks
3)	The diagram shows part of a sketch of the function $y = \sin(x)$. 		
(a)	Write down the coordinates of the point P.	**(a)** (180 , 0)	**(1)**
(b)	Write down the coordinates of the point Q.	**(b)** (270 , -1)	**(1)**
4) (a)	The equation of Circle C is $x2 + y2 = 16$. Draw a sketch of circle C. 	**(a)** Any circle centre (0,0) drawn Correct radius 	**(1)** **(1)**
(b)	The circle C is translated by the vector $\begin{pmatrix} 5 \\ 0 \end{pmatrix}$. Draw a sketch of circle B. 	**(b)** Any circle drawn Correct intercepts on x - axis 	**(1)** **(1)**

Where to go next?

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