

Non-Linear Simultaneous Equations

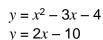




REVISE THIS TOPIC

CHECK YOUR **ANSWERS**







[5 marks]

Answer_

2 Solve algebraically the simultaneous equations

$$y = x^2 + 5x - 8$$
$$y - 4x = 4$$



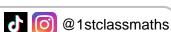
[5 marks]



Answer









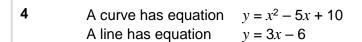
3	Solve algebraically the simultaneous equations
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 $y = 3x^2 + 2x - 8$
y = 9x - 10

[5 marks]

Answer





Find the coordinates of the point of intersection of the curve and the line.[4 marks]









5	A curve has equation	$y = 5x^2 - x - 15$
	A line has equation	y = 10x - 3



Find the	coordinates	of the points	of intersection	of the curv	e and the line.
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Answers (_____, ____) and (_____, ____)

6 Solve algebraically the simultaneous equations

$$y = x^2 + x + 1$$
$$y = x + 3$$



Give your answers as exact values. [5 marks]

Answer

19

Turn over ▶





Solve algebraically the simultaneous equations



$$x^2 + y^2 = 100$$
$$y = x - 2$$

[5 marks]

Answer_

Solve algebraically the simultaneous equations 8



$$x^2 + y^2 = 200$$

y = $2x - 10$





Answer _





9	A circle has equation	$x^2 + y^2 = 65$
	A line has equation	2y = 10 - x

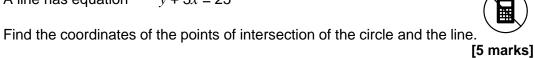


Find the coordinates	of the points of intersection	n of the circle and th	ie line.
			Г



Answers (_____, ____) and (_____, ____)

A circle has equation $x^2 + y^2 = 85$ A line has equation y + 3x = 25



Answers (_____, ___) and (____, ___)

20

Turn over ▶





11	Solve algebraically the simultaneous	equations

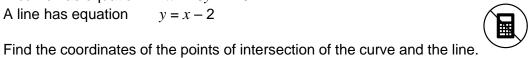


$$x^2 - 2y^2 = 7$$
$$2y = x + 1$$

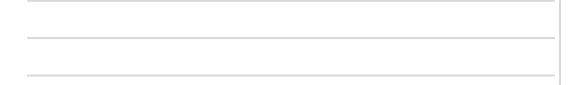
[5 marks]

Answer_

12 A curve has equation $2x^2 - 3y^2 = 15$ A line has equation y = x - 2



[5 marks]



Answers (_____, ___) and (_____,







13	A curve has equation	$x^2 - 8y^2 = k$	where k is a positive integer.
	A line has equation	4y = x - 1	



The curve and the line intersect at the points A and B. The *x*-coordinate of point A is -7.

13 (a) Work out th	ne value of k .
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[3 marks]

,

[4 marks]

B= (_____, ____)





