

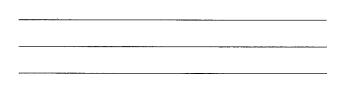
The equation of the tangent (1)

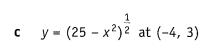
QUESTION **1** Find the equation of the tangent to the curve:

a $y = 3x^4 - 7x^2 + 2$ at (1, -2)

b $y = x^2 + 2$ at the point where x = -1





d $y = \frac{1}{x}$ at the point where x = 2

The equation of the tangent (2)

UESTION 1	At what point on	the curve $y = 2x^2$ -	-7x + 5 is the tang	ent parallel to th	e line y = 5x - 2?
			~		
UESTION 2					
	quation of the tang	ent to the curve x^i	$^{2} = 12y \text{ at } (6, 3)$		· ************************************
·					
At what p	oint does this tang	ent cut the y-axis?			
		<u> </u>			
QUESTION 3				· ·	
Find the e	equation of the tang	gent to the curve y	$= x^2$ at $x = a$	·	
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			aurena -	40.00	t i
If this tar	ngent cuts the y-axi	is at $(0, -9)$, find t	the two possible val	ues of <i>a</i> .	
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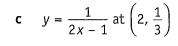
The equation of the normal (1)

Find the equation of the normal to the curve: QUESTION 1

a $y = 3x^2$ at (-1, 3)

b $y = x^3 - 4x$ at the point where x = 2

- **d** $y = \sqrt{x}$ at the point where x = 4



EXCEL HSC MATHEMATICS REVISION & EXAM WORKBOOK

The equation of the normal (2)

QUESTION **1** Find the coordinates of the point on the curve $y = 8x - x^2$ where the normal is parallel to the line x + 2y - 5 = 0

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QUESTION **2** The normal to the curve $y = \frac{1}{8}x^2$ at $P\left(2, \frac{1}{2}\right)$ meets the curve again at Q. Find the coordinates of Q.

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$$ax - 6y + 19 = 0$$
 $bx + 8y - 2 = 0$ $c27x - 6y - 52 = 0$ $d4x + y - 18 = 0$