



Air maths tuition

Interact, engage and perform

Differentiation: What is 2nd Order differentiation?

$y = 4x^3 - 5x^2 + 6$	$f(x) = 3x^2 - 5$	If $y = 3x^3 - 2x + 1$
$\frac{d^2y}{dx^2} = \frac{d}{dx} \left(\frac{dy}{dx} \right)$	$f''(x) = \frac{d}{dx} (f'(x))$	and $\frac{d^2y}{dx^2} = 4$
		Find x .
$\therefore \frac{dy}{dx} = 12x^2 - 10x$	$f'(x) = 6x$	$\therefore \frac{dy}{dx} = 9x^2 - 2$
$\therefore \frac{d^2y}{dx^2} = 24x - 10$	$\therefore f''(x) = 6$	$\therefore \frac{d^2y}{dx^2} = 18x$
		$\therefore 18x = 4$
		$\therefore x = \frac{4}{18}$
		$\therefore x = \frac{2}{9}$

With the acknowledgement of [Exam Solutions](#).
Find lots more revision sheets on [Air Maths Tuition](#).
[This Video](#)



Exam Solutions

maths made easy