

Fill in the Blanks

Using the Gradient Function

Equation	Gradient Function	Point P	Gradient at P
$y = x^2$	$\frac{dy}{dx} = 2x$	(2, 4)	4
$y = x^3 + x$		(1, 2)	
$y = 6x - x^2$		(4, 8)	
$y = x^3 - 3x^2 + 4x$		(-1, 0)	
$y = 5x^2 - 7x + 1$		(-2, 36)	
$y = (2x + 5)(x - 3)$		(3, 0)	
$y = 3x(x - 1)^2$		(-1, -12)	
$y = \frac{1}{x^2}$		$(2, \frac{1}{4})$	
$y = \frac{x^4 - 5x^3}{x}$		(1, -4)	
$y = \frac{2x^3 + x}{x^2}$		$(3, \frac{19}{3})$	
$y = 10 - 2x - x^2$			-10
$y = x^4 + 3$			32
$y = (x + 4)(3x - 5)$			1
$y = x^2 + \frac{54}{x}$			0
	$\frac{dy}{dx} = 3x^2 + 6x - 1$	(1, 3)	