



1. Complete the table:

Curve	$\frac{dy}{dx}$
$y = x^5$	
$f(x) = 2x^3$	
$f(x) = x^{-3}$	
$y = 5x^{-8}$	
$y = 4x^3 + 3x^{-4}$	
$f(x) = 2x + \frac{1}{3}x^6$	
$f(x) = 7 + x^{-\frac{4}{5}}$	
$y = 3x^{-1} - 5x^{-\frac{3}{2}}$	
$f(x) = 2 - 7x^{-1} + x^{-\frac{8}{3}}$	
$y = \frac{1}{4x} - \frac{1}{x^2}$	

Solutions

Curve	$\frac{dy}{dx}$	
$y = x^5$	$\frac{dy}{dx} = 5x^4$	M1
$f(x) = 2x^3$	$f'(x) = 6x^2$	M1
$f(x) = x^{-3}$	$f'(x) = -3x^{-4}$	M1
$y = 5x^{-8}$	$\frac{dy}{dx} = -40x^{-9}$	M1
$y = 4x^3 + 3x^{-4}$	$\frac{dy}{dx} = 12x^2 - 12x^{-5}$	M1
$f(x) = 2x + \frac{1}{3}x^6$	$f'(x) = 2 + 2x^5$	M1
$f(x) = 7 + x^{-\frac{4}{5}}$	$f'(x) = -\frac{4}{5}x^{-1.8}$	M1
$y = 3x^{-1} - 5x^{-\frac{3}{2}}$	$\frac{dy}{dx} = -3x^{-2} + \frac{15}{2}x^{-2.5}$	M1
$f(x) = 2 - 7x^{-1} + x^{-\frac{8}{3}}$	$f'(x) = 7x^{-2} - \frac{8}{3}x^{-\frac{11}{3}}$	M1
$y = \frac{1}{4x} - \frac{1}{x^2}$	$\frac{dy}{dx} = -4x^{-2} + 2x^{-3}$	M1

