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## Differentiation

| Past Paper Question | C1 Edexcel January 2012

Q1(a)

Given  $y = x^4 + 6x^{1/2}$ , Find  $\frac{dy}{dx}$

$\therefore \frac{dy}{dx} = 4x^3 + 3x^{-1/2}$

$= 4x^3 + 3\left(\frac{1}{x^{1/2}}\right)$

$= 4x^3 + \frac{3}{x^{1/2}}$

$= 4x^3 + \frac{3}{\sqrt{x}}$

On the right side of the page, the power rule is written in red:  $y = ax^n$  and  $\frac{dy}{dx} = anx^{n-1}$ . A blue play button icon is located in the bottom right corner of the video frame.

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