

Start

$$y = (3x^2 - 2)^4$$

$\frac{dy}{dx} = \frac{1}{x}$	$y = \frac{x}{x^2 + 5}$	<i>Quotient rule only</i>	$\frac{dy}{dx} = v \frac{du}{dx} + u \frac{dv}{dx}$	$y = uv$	<i>Chain Rule</i>
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$$y = \ln x$$

$$\frac{dy}{dx} = \frac{v \frac{du}{dx} - u \frac{dv}{dx}}{v^2}$$

$y = \frac{u}{v}$	<i>Quotient rule and chain rule</i>	$y = \frac{5e^{\sin 3x}}{x}$	<i>product rule only</i>	$y = x \sin x$	$\frac{dy}{dx} = \cos x$
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$$y = \sin x$$

Product rule, quotient rule and chain rule

Finish	$\frac{dy}{dx} = e^x$	$y = e^x$	$y = 3x \cos(5x - \pi)$	<i>Product rule and chain rule</i>	$y = \frac{x e^{2x}}{\sin 3x}$
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