3.3 Quotient Rule

Standard:	
MCD1e	
	1

Let's consider the function:
$$\frac{f(x)}{g(x)}$$

We want to find the derivative of the function.

$$\left(\frac{f'}{q}\right) = \frac{g \cdot f' - f \cdot g'}{q^2} \leftarrow \text{Quotient Rule}$$

[Example]
$$y = \frac{2x+5}{3x-2}$$
. Find y'

$$y' = (3x-2)(1) - (2x+5)(3)$$

$$(3x-2)^{2}$$

$$= (6x-4) - (6x+15)$$

$$(3x-2)^{2}$$

$$= 6x - 4 - 6x - 15$$

$$(3x-2)^{2}$$

$$= -19$$
 $(3x-2)^2$

This was created by Keenan Xavier Lee, 2013. See my website for more information, lee-apcalculus.weebly.com.