Quotient Rule

Investigation Week 11

All rational functions could be written as the product of powers, eg:

$$y = \frac{2x}{(4x-3)^3} \text{ can also be written as } y = 2x(4x-3)^{-3}$$

If this is the case, why should we ever use the quotient rule?

Your investigation this week is to demonstrate via 2 examples, one that is easier to differentiate using the product rule (by converting to powers), and one that is easier to differentiate using the quotient rule.

At the end make a general statement about when you should use each rule, (with regards to rational functions).