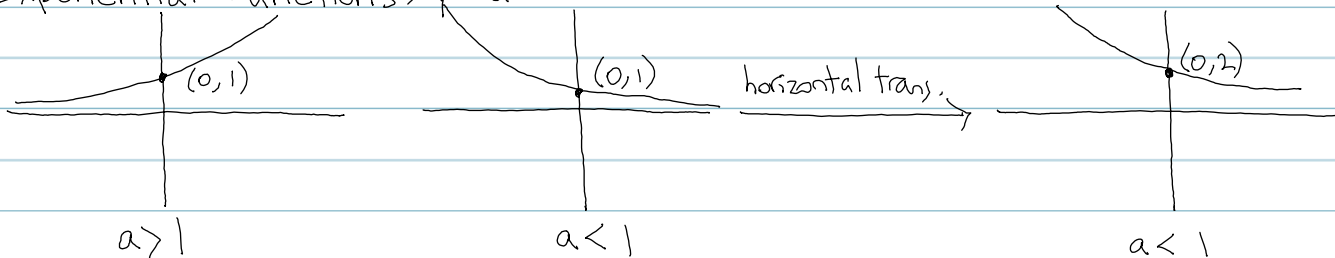


Differentiating Power vs. Exponential Functions

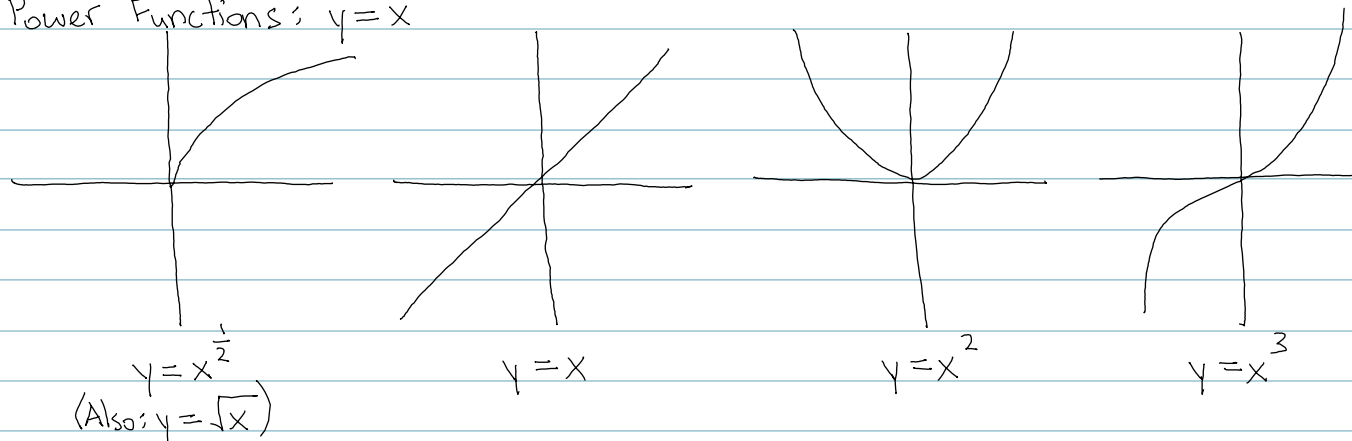
Differentiate $y = 2x^e$ and $y = e^{2x}$

Exponential Functions: $y = a^x$



In general, y -int: $(0, 1)$

Power Functions: $y = x^b$



$y = x^2$ & $y = 2^x$: derivatives not equal!

$$y = 2x^e$$
$$y' = 2ex^{e-1}$$

$$y = e^{2x}$$
$$y' = (e^{2x})(2)$$
$$= 2e^{2x}$$

Go to wolframalpha.com.