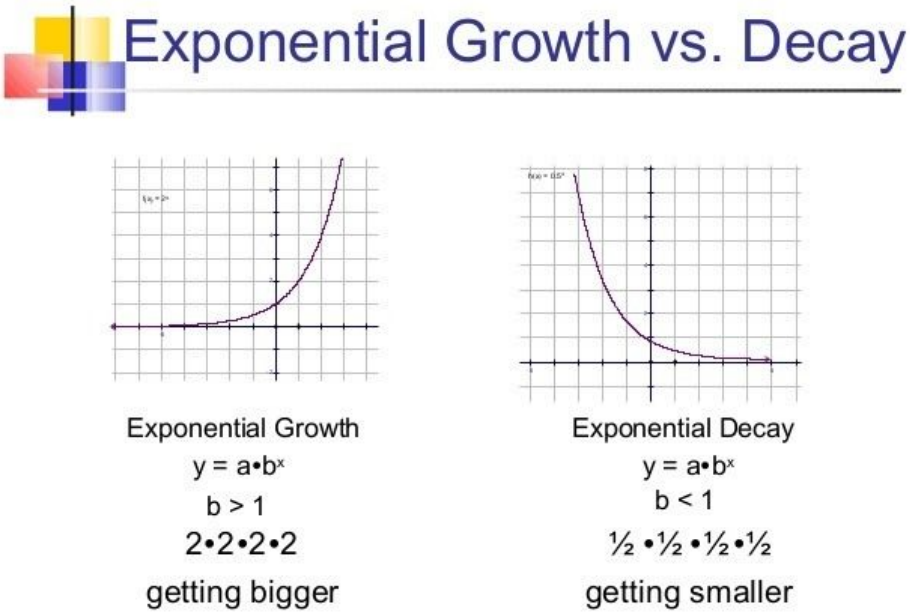
Problem 1: Function ab^x

This exponential function ab^x means y increases exponentially as raising x. The initial quantity is given by the value that is easy to see (let x=0 and y=a left). Here value b is the growth factor.

If we limit b to 0<b<1, the function will decline (depicted below) and if b>1, the function will increase.

Exponential Growth vs. Decay



Domain: - (- ∞ to ∞)

Range: - (0, ∞)

References:-

1. https://www.quora.com/In-the-equation-y-ab-x-what-does-each-symbol-mean-Which-is-the-initial-amount-and-which-is-the-growth-factor [Accessed 6 Jul. 2019].