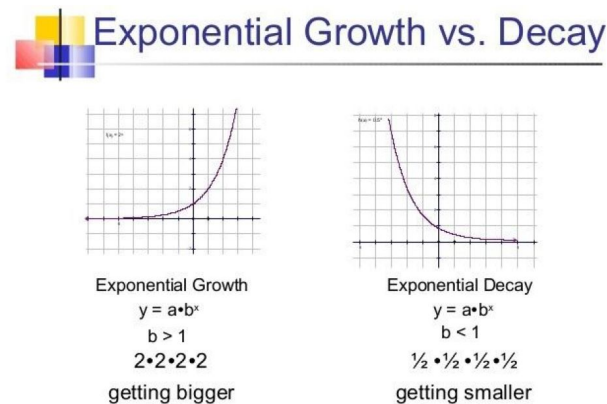


## Problem 1. Project Description

### Abstract

This exponential function  $ab^x$  means  $y$  increases exponentially as  $x$  is raised. The initial quantity is given by the  $a$  and  $y = a$  (left). Here  $b$  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.



1.JPG

Figure 1: Figure 1:  $y = ab^x$ 

Properties of the function  $y = \arccos(x)$  that make it unique from other inverse trigonometric functions:

1. Domain is in the range of  $[(-\pi/2 \text{ to } \pi/2)]$ .
2. Range is part of  $[0, \pi]$ .