**MANUSHREE MALLARAJU: 40082236**

**FUNCTION F6 :**

The above Transcendental function is one of the power rules of math. Here, the power of a base number is raised to another exponent. The first order exponent is calculated and then added to the base value as a single exponent.

This is an exponential function, which means as you increase xx, yy increases exponentially. The initial amount is given by the value aa, which is easy to see (just let x=0x=0 and you have y=ay=a left). The growth factor is the value bb.

If you restrict b such that 0<b<10<b<1, the function will decay (represented below) and if b>1b>1, the function will grow.