SOFTWARE ENGINEERING PROCESS

Function(F9): x^y

Name: Venkata Lakshmi Sai Krishna Chadalavada

ID: 40087977

The function describes about the x raised to the power of y. The term power was used by the Greek mathematician Euclid for the square of a line.

The function is mainly used in the Tumor growth check, investments and calculate population growth.

With the even-power function, as the input increases or decreases without bound, the output values become very huge, positive numbers. Accordingly, we could describe this behavior by saying that as x approaches positive or negative infinity, the f(x) values increase without bound.

The domain and codomain of the function

Domain is

{(x, y) element R^2 : (x>=0 and y!=0) or x>0}

(assuming a real-valued function)

Codomain is

The real numbers consisting of positive number if the given number is negative number and all will be in the range of the real numbers, As x tends to increase, the value of the function also tends to ∞.If the input increases and the codomain increases, If it decreases the codomain also decreases.

The function takes all the real values from $-\infty$ to ∞.
Therefore, the range of the function is set of real numbers and mostly from 0 to ∞.

References

https://en.wikipedia.org/wiki/Exponentiation

http://www.nabla.hr/FU-GraphTranF1.htm