**SOFTWARE ENGINEERING PROCESS**

**Function(F9): xy**

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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 ∞.

The function takes all the real values from −∞ 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>