

Multiplication (Recursive)

Sunday, March 20, 2022 6:10 PM

Given two numbers a & b

$$\begin{array}{cc} 3 & 5 \\ \hline 3 \times 5 \end{array}$$

Base Case :
 $y(b == 1)$
return a .

$$ans = a + multiply(a, b-1)$$

$$(3, 5)$$

$$ans = 3 + multiply(3, 4)$$

$$+ \downarrow (3 + mult(3, 3))$$

$$+ \downarrow (3 + mult(3, 2))$$

$$+ (3 + mult(3, 1))$$

$$+ (3)$$

$$3 + 3 + 3 + 3 + 3$$

$$\Rightarrow (15)$$