

Number of stack frames needed to calculate x^n :

- n = 0: 1
- n = 1: 2
- n = 2: 3
- n = 3: 4
- n = 4: 4
- n = 5: 5
- n = 6: 5
- n = 7: 6
- n = 8: 5
- n = 9: 6
- n = 10: 6
- n = 11: 7
- n = 12: 6

Structure of stack frame utilized in my program:

lower
address

local variables (i.e return value)
x = base value
n = new exponent value
$r_0 = x$
$r_1 = n$
r_2
fp
lr
stack base

higher
address