fibArray

$c_1 + \sum_{2}^{n} c_2$

$\Rightarrow O(n)$ since 1 and 0 are both also operated

fibLoop

$c_1 + \sum_{3}^{n-1} c_2$

$\Rightarrow O(n)$ since 1 and 0 are both also operated

fibRec

number of branches = q
depth of tree = (n-1), (n-2)

$c_1 + \vdots^{q^{(n-1)}} + q^{(n-2)} = 2^n$

q^n while $q > 1$

$q^{(n-1)} + q^{(n-2)} = q^n$

$\frac{q^{(n-1)}}{q^{(n-2)}} + \frac{q^{(n-2)}}{q^{(n-2)}} = \frac{q^n}{q^{(n-2)}}$

$q + 1 = q^2$

$q^2 - q - 1 = 0$

$\Rightarrow \frac{1 \pm \sqrt{1 - 4(1)(-1)}}{2} = 1.61803398...$

aka golden ratio

$\Rightarrow O(1.61803398^n)$

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