

Good luck!

1. Solve the recurrence relation

$$\begin{aligned}F(1) &= 2 \\F(n) &= 2F(n-1) + 2^n \text{ for } n \geq 2.\end{aligned}$$

Note:

$$S(n) = c^{n-1}S(1) + \sum_{i=2}^n c^{n-i}g(i)$$