Q1:

$f(n+1) = f(n) + f(n-1),\ 0 \le c * g(n) \le f(n)$

$c = 4/9,\ and\ g(n) = (3/2)^n$

$n = 0$ 代入 $\rightarrow 4/9 * (3/2)^n = 1 > f(0) = 0 \Rightarrow Wrong$
$n = 1$ 代入 $\rightarrow 4/9 * (3/2)^n = 2/3 < f(1) = 1 \Rightarrow$ 成立
假設 $n = k$ 代入時 $f(n) \ge 4/9 * (3/2)^n \ge 0 \Rightarrow$ 成立

$n = k + 1$ 代入
$f(k+1) = f(k) + f(k-1)$
$\ge (4/9) * (3/2)^k + (4/9) * (3/2)^{k-1}$
$= (4/9) * (5/2) * (3/2)^{k-1} > (4/9) * (3/2)^2 * (3/2)^{k-1}$
$= (4/9) * (3/2)^{k+1}$ 成立

$\therefore$ 根據數學歸納法可以得知$f(n) \ge 4/9 * (3/2)^n\ \ \forall\ n \ge 1$都成立

$\therefore$ 可以得到 $n_0 = 1$ $_\#$