$http://www.isibang.ac.in/\sim athreya/Teaching/wom19$ 

Name:	Score:	

1. Let  $\{y_n\}_{n=1}^{\infty} \text{be a sequence of real numbers } y_1 = y_2 = y_3 = 1$  and

$$y_n = y_{n-1} + y_{n-2} + y_{n-3}$$

for  $n \ge 4$ . Prove that  $y_n < 2^n$  for all  $n \ge 1$ .