

Quiz 5 MATH 2502 Spring 2019

$$\begin{cases} a_{n+1} = a_n + a_{n-1} \\ a_0 = 2, a_1 = 1 \end{cases} \leftarrow \text{called the "Lucas sequence"}$$

Soln: First five terms:

$$a_0 = 2$$

$$a_1 = 1$$

$$a_2 = a_1 + a_0 = 2 + 1 = 3$$

$$a_3 = a_2 + a_1 = 3 + 1 = 4$$

$$a_4 = a_3 + a_2 = 4 + 3 = 7$$

$$a_5 = a_4 + a_3 = 7 + 4 = 11$$

$$a_6 = a_5 + a_4 = 11 + 7 = 18$$