

1 March 2024

# Fibonacci Polynomial Identities

What did you observe?

What questions do you have?

## Generalizing the Fibonacci numbers

$$F_0 = 0, F_1 = 1, F_n = F_{n-1} + F_{n-2}$$

We could change:

Today ✖ (1) The starting values

Lucas sequence:  $L_0 = 2, L_1 = 1$   
 $L_n = L_{n-1} + L_{n-2}$  for  $n > 1$

Then:  $L_3 = 3, L_4 = 4, L_5 = 7, L_6 = 11, \dots$

2, 1, 3, 4, 7, 11, 18, 29, 47, 76, ...

Monday (2) The recurrence



