## California State University Sacramento - Math 101

## Homework Assignment 11

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Exercise 6

## Exercise 6

## 1. Solve

$$a_n = 3a_{n-1} - 2a_{n-2}$$

given that  $a_0 = 2$  and  $a_1 = 3$ .

2. Solve

$$a_n - 6a_{n-1} + 9a_{n-2} = 0,$$

given that  $a_0 = 2$  and  $a_1 = 3$ .

3. Solve

$$a_n = \frac{1}{2}(a_{n-1} + a_{n-2}),$$

given that  $a_0 = 0$  and  $a_1 = 1$ .

4. Solve

$$a_n - 4a_{n-1} + 4a_{n-2} = 0,$$

given that  $a_0 = -\frac{1}{4}$  and  $a_1 = 1$ .

5. Solve

$$2a_n = a_{n-1} + 2a_{n-2} - a_{n-3},$$

given that  $a_0 = 0$ ,  $a_1 = 1$  and  $a_2 = 2$ .