Concept – Fibonacci Sequences

So far in this topic we have been working with *first order recurrence relations.* The

Fibonacci sequence is the most famous example of a _____
In these recurrence relations you need to know the first two terms to define the relation.

$$t_1 = a_1 \ and \ t_2 = a_2 \qquad t_n = t_{n-2} + t_{n-1}$$

How to

In the Fibonacci sequence t_1 and t_2 both equal 1.

$t_3 =$ _____ $=$ _____

$t_4 =$ _____ $=$ _____

$t_5 =$ _____ $=$ _____

$t_6 =$ _____ $=$ _____

So the first 6 terms of the fibonacci sequence are _____

Another of these types of sequence is the Lucas Sequence, which is defined as

$$t_1 = 1 \ and \ t_2 = 3 \qquad t_n = t_{n-2} + t_{n-1}$$

Using this recurrence relations the first 6 terms in the Lucas sequence are

_____

Worked Example
Choose a different second order sequence, write a recurrence relation for this sequence and calculate the first 6 terms.