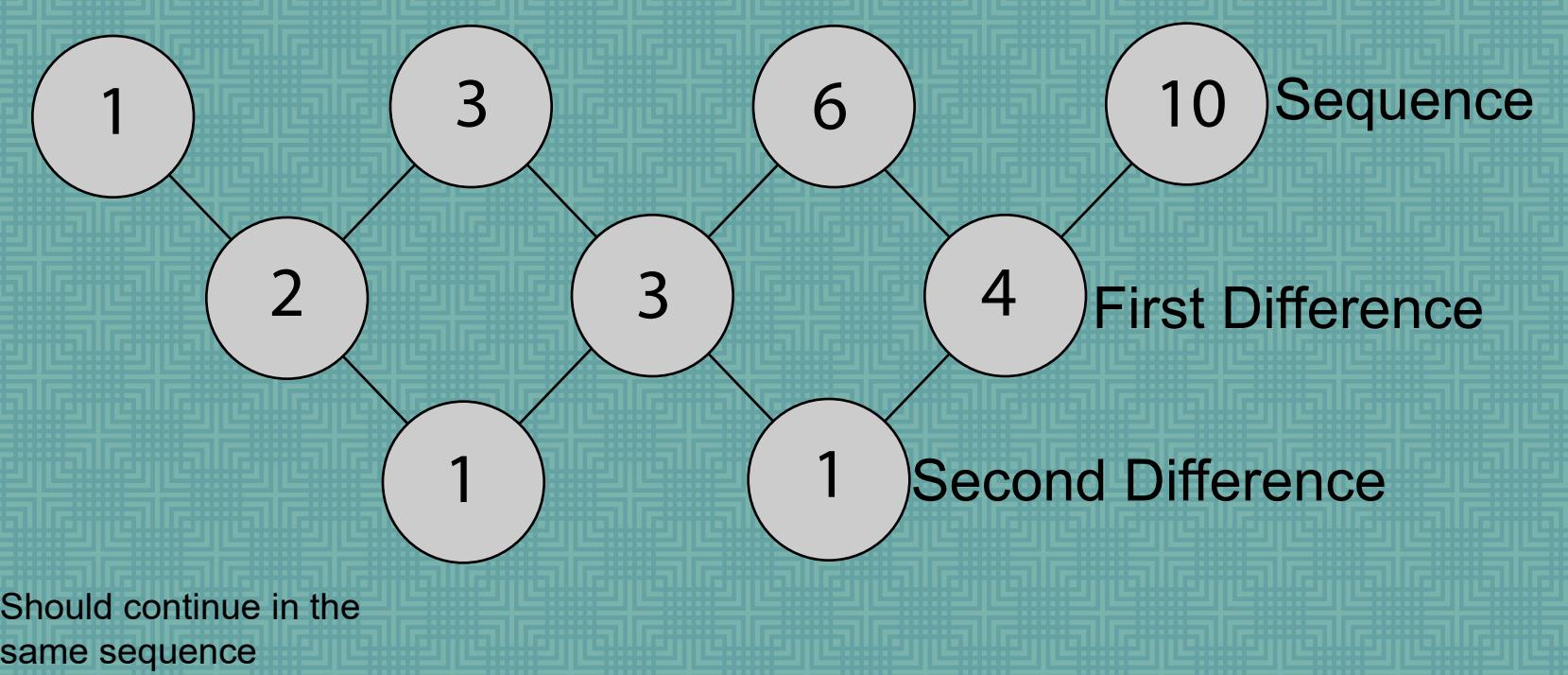


# Special Assignment #6 Arrange-

## First Tool: Trees ( $n=1$ to $n=4$ )



## Second Tool: Triangular Number

Closed-form expression  
for Triangular Numbers:  $S_n = \frac{n(n+1)}{2}$

This equation makes it easy to find the  $n^{\text{th}}$  element of this sequence. It is also one of the most efficient methods to find the sequence.

List S from  
 $n=1$  to  $n=41$ :

$$S_n = \{1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190, 210, 231, 253, 276, 300, 325, 351, 378, 406, 435, 465, 496, 528, 561, 595, 630, 666, 703, 741, 780, 820, 861\}$$

Visualization of  
triangular numbers

