The following is written in python, the correct calls to find the 5th lucas number would be -
lucasRecursive(5)
lucasIterative(5)

```python
def lucasRecursive(n, memory = []):
    #if no storage, create empty array for storage
    if len(memory) == 0:
        memory = [0 for x in range(n+1)]

    #Check storage
    if memory[n] != 0:
        return memory[n]
    #Base cases
    if n == 0:
        calc = 2
    elif n == 1:
        calc = 1
    #We're calculating something new, recurse
    else:
        calc =  lucasRecursive(n -1, memory) + lucasRecursive(n -2, memory)
    #Store to memory
    memory[n] = calc
    #return
    return calc

def lucasIterative(n):
    x = 0
    while x < n:
        #Base cases
        if x == 0:
            curr = 2
        elif x == 1:
            prev = curr
            curr = 1
        #Iterative case
        else:
            total = prev + curr
            prev = curr
            curr = total
        x = x+1
    return total + prev
```