1. **[5 points]** What does each of the following expression evaluate to? Assume that \texttt{isPrime} is a boolean function that takes one argument and returns \texttt{True} if that argument is a *prime number*; otherwise the function returns \texttt{False}. Assume that \texttt{concat} is a function that takes two arguments \texttt{a} and \texttt{b} and returns \texttt{a + b}.

   (a) \texttt{map(range, range(5)) Ans. } [ [ ], [0], [0,1], [0,1,2], [0,1,2,3] ]

   (b) \texttt{len(filter(isPrime, range(20))) Ans. 8}

   (c) \texttt{reduce(concat, map(str, range(1, 15, 3))) Ans. '1471013'}

   (d) \texttt{reduce(concat, range(1, 10, 2)) Ans. 25}

   (e) \texttt{reduce(concat, map(range, range(5))) Ans. [0, 0, 1, 0, 1, 2, 0, 1, 2, 3]}

Turn over for Problem 2.
2. [5 points] Here is a partially completed function called `secondMax` that takes a list of numbers as a parameter and returns the number that is second largest in the list. For example, if the given list is [-1, 11, 3, 8, 1, 7] then the function would return 8. If the given list is [-1, 11, 3, 11, 1, 7] then the function would return 11. Using the built-in Python functions and methods, we can solve this problem in 3 lines of code. The idea is to find the maximum element $m$, then find the index (position) of $m$, and then find the maximum element in the list obtained by excluding $m$. Your task is to supply the two missing lines of code.

```python
def secondMax(L):
    m = max(L)

    k = L[0:L.index(m)] + L[L.index(m)+1: ]

    return max(k)
```