

Week 1 Discussion Worksheet

1.

```
def power(x, a):  
    """  
    Write a function that calculates x^a.  
    Assume both x and a are positive numbers.  
  
    >>> power(2, 4)  
    16  
    >>> power(9,2)  
    81  
    """
```

2.

```
def list_sorter(master_list):  
    """  
    Write a function that sorts numbers from  
    master_list into a list of even numbers  
    and a list of odd numbers.  
  
    >>> list_sorter([1,2,3,4,5,6,7,8])  
    ([1,3,5,7],[2,4,6,8])  
    >>> list_sorter([1,3,5,7])  
    ([1,3,5,7], [])  
    """
```

3.

```
def checker(string_lst, comparer):  
    """  
    Write a function that counts the number of strings in a list  
    that are equivalent to comparer.  
  
    >>> checker(['she', 'sells', 'sea', 'shells', 'at', 'the', 'sea', 'shore'], 'sea')  
    2  
    >>> checker([], 'blank')  
    0  
    """
```

4.

```
def strictly_increasing(lst):  
    """  
    Write a function that takes in a list of integers and  
    returns a new list containing only the numbers that are  
    in increasing order. Numbers should appear in the same  
    order in the input and output list.  
  
    >>> increasing([1, 3, 2, 4, 5, 8, 7, 6, 9])  
    [1, 3, 4, 5, 8, 9]  
    """
```