

1.

```
def common (t1,t2):  
    """ Assumes t1&t1 are tuples.  
        Returns tuple result with their common terms. """  
    result=()  
    for i in t1:  
        if i in t2 and i not in result:  
            result=result+(i,)   
    return result
```

2.

```
def factor (x,y):  
    """ Assumes x&y are integers.  
        Returns a tuple with their least and greatest common factor."""  
    common=()  
    for i in range (2,abs(x)+1):  
        if x%i==0 and y%i==0:  
            common=common+(i,)   
    ans=((min(common),max(common)))  
    return ans
```

3.

```
def single_copy (L):  
    """ Assumes L is a list, the function delete duplicates from  
        L."""  
    L1=[]  
    L2=L[:]  
    for i in L2:  
        L.remove(i)  
        if i not in L1:  
            L.append(i)  
            L1.append(i)
```

```
#check:  
#y=[45,"op",99,45,"op",78,105]  
#single_copy(y)  
#print (y)
```

4.

```
def count_terms_in_interval (L,x,y):  
    """Assuming L is a list of floats, x&y are floats.  
        Returns the number of times z appear on the list where  
        min(x,y)<z<max(x,y) """  
    num=0  
    for i in L:  
        if min(x,y)<i and i<max(x,y):  
            num=num+1  
    return num
```

```
# check:  
P=[23,56.67,-23,90,78,0,900,23]  
print (count_terms_in_interval(P,2,100))
```

5.

```
def common3(L1,L2,L3):  
    """ Assuming L1,L2&L3 are lists.  
        Changes L1 and leaves in it only the terms that are common to the 3 original lists.  
        The function does not remove duplicates """  
    L1_copy=L1[:]  
    for i in L1_copy:  
        if i not in L2 or i not in L3:  
            L1.remove(i)
```

check:

```
R1=[34,67,67,78,99,12,123]  
R2=[67,12,123,34]  
R3=[67,123]  
common3(R1,R2,R3)  
print(R1)
```