

```
#Q1
l1=[3, 6, 9, 12, 15, 18, 21]
l2=[4, 8, 12, 16, 20, 24, 28]
l3=[]
for i in range(len(l1)):
    if i%2!=0:
        l3.append(l1[i])
for j in range(len(l2)):
    if j%2==0:
        l3.append(l2[j])
print(l3)

[6, 12, 18, 4, 12, 20, 28]
```

```
#Q2
a= int(input("Enter a number"))
c=0
while a>0:
    a=a//10
    c+=1
print(c)
```

```
Enter a number25
2
```

```
#Q3
b = [11, 22, 28, 44, 55, 23, 24, 29, 27, 28, 16, 12,25,31,25,2,18]
for i in sorted(b):
    if(i%2 == 0):
        b.remove(i)
print(b)

[11, 55, 23, 29, 27, 25, 31, 25]
```

```
#Q4
a=[]
for i in range(1,31):
    s=i**2
    a.append(s)
temp=a
b=a[:5]
c=temp[-5:]
b.extend(c)
print(b)

[1, 4, 9, 16, 25, 676, 729, 784, 841, 900]
```

```
#Q5
a=[1,2,3]
b=[]
print('The permutations are: ')
```

```

for i in a:
    for j in a:
        for k in a:
            if i!=j and j!=k and k!=i:
                b=[]
                b.append(i)
                b.append(j)
                b.append(k)
                print(b)

```

The permutations are:

```

[1, 2, 3]
[1, 3, 2]
[2, 1, 3]
[2, 3, 1]
[3, 1, 2]
[3, 2, 1]

```

#Q6

```

a=[1,1,0,2]
b=[2,1,1,0]
e=0
while True:
    c=a[0]
    a.pop(0)
    a.append(c)
    d=len(b)
    e+=1
    if a==b:
        print(' identical')
        break

    if e==d:
        print('not identical')
        break

    identical

```

#Q7

```

a=[0,1,2,3,4,5]
for i in range(0,len(a),2):
    a[i],a[i+1]=a[i+1],a[i]
print(a)

```

```

[1, 0, 3, 2, 5, 4]

```

#Q8

```

a=[1,2,3]
b=['a','b','c']
c=0
for i in a:

```

```
print(i,b[c])
c=c+1
```

```
1 a
2 b
3 c
```

#Q9

```
a=[1,2,3,4,5,6,7,8,9]
```

```
b=[]
```

```
c=[]
```

```
for i in a:
```

```
    for j in a:
```

```
        if i!=j :
```

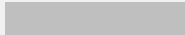
```
            b=[i]
```

```
            b.append(j)
```

```
            c.append(b)
```

```
print(c)
```

```
[[1, 2], [1, 3], [1, 4], [1, 5], [1, 6], [1, 7], [1, 8], [1, 9], [2, 1], [2, 3], [2,
```



#Q10

```
x= [[10, 20], [40], [30, 56, 25], [10, 20], [33],[40]]
```

```
y=[]
```

```
for i in x:
```

```
    if i not in y:
```

```
        y.append(i)
```

```
print(y)
```

```
[[10, 20], [40], [30, 56, 25], [33]]
```