In [8]:

```python
#1


def amplify(n):

    k=[i*10 if i%4==0 else i for i in range(1,n+1)]
    print(k)

amplify(4)

amplify(3)
amplify(25)
```

```
[1, 2, 3, 40]
[1, 2, 3]
[1, 2, 3, 40, 5, 6, 7, 80, 9, 10, 11, 120, 13, 14, 15, 160, 17, 18, 19, 20
0, 21, 22, 23, 240, 25]
```

In [12]:

```python
# 2

def unique(n):
    d={}
    for i in set(n):
        d[i]=n.count(i)
    for i in d:
        if d[i]==1:
            print(i)
unique([3, 3, 3, 7, 3, 3])
unique([0, 0, 0.77, 0, 0])
unique([0, 1, 1, 1, 1, 1, 1])
```

```
7
0.77
0
```

In [15]:

```python
# 3
import math
class Circle:
    def __init__(self,r):
        self.r=r

    def getarea(self):
        print(math.pi*self.r**2)
    def getperimeter(self):
        print(2*math.pi*self.r)


c=Circle(11)

c.getarea()
c.getperimeter()



c=Circle(4.44)

c.getarea()
c.getperimeter()
```

```
380.132711084365
69.11503837897544
61.93210093580775
27.897342763877365
```

In [18]:

```python
# 4


def sort_by_length(l):
    l.sort(key=len)
    print(l)

sort_by_length(["Google", "Apple", "Microsoft"])
sort_by_length(["Leonardo", "Michelangelo", "Raphael", "Donatello"])
sort_by_length(["Turing", "Einstein", "Jung"])
```

```
['Apple', 'Google', 'Microsoft']
['Raphael', 'Leonardo', 'Donatello', 'Michelangelo']
['Jung', 'Turing', 'Einstein']
```

In [20]:

```
# 5


def is_triplet(l,m,n):
    l=sorted([l,m,n])
    print(l[0]**2+l[1]**2==l[2]**2)


is_triplet(3, 4, 5)
is_triplet(13,5,12)
is_triplet(1,2,3)
```

```
True
True
False
```