In [2]:

```python
primenumber=[2]
for i in range(2,300+1):
    x=0
    for j in primenumber:
        if i%j==0:
            x=1
            break
    if x==0:
        primenumber.append(i)
print(primenumber)
```

[2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139, 149, 151, 157, 163, 167, 17 3, 179, 181, 191, 193, 197, 199, 211, 223, 227, 229, 233, 239, 241, 251, 257, 263, 2 69, 271, 277, 281, 283, 293]

In [6]:

```python
sum=0
for i in range(1,30+1):
    x=1
    for j in range(1,i+1):
        x=x*j
    sum+=x
print(sum)
```

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In [14]:

```python
import random
array=[]
for i in range(1,100+1):
    array.append(random.randint(1,100))
for j in range(1,100):
    for k in range(0,99):
      if array[k]>=array[k+1]:
        x=array[k+1]
        array[k+1]=array[k]
        array[k]=x
print(array)
```

[1, 1, 1, 2, 3, 5, 6, 6, 7, 8, 8, 12, 14, 14, 14, 15, 18, 18, 18, 18, 20, 23, 24, 2 4, 25, 25, 27, 29, 30, 30, 31, 31, 33, 33, 34, 34, 34, 35, 35, 37, 37, 38, 38, 38, 4 0, 40, 40, 41, 43, 43, 44, 44, 45, 46, 46, 46, 50, 50, 50, 51, 53, 53, 54, 54, 55, 5 6, 58, 58, 58, 61, 62, 62, 64, 64, 66, 67, 69, 71, 73, 73, 74, 78, 79, 80, 80, 82, 8 3, 84, 86, 86, 89, 89, 90, 92, 92, 93, 95, 96, 100, 100]

In [13]:

```python
import math
number=[]
for i in range(1,2000+1):
    factorslimmit=math.floor(i/2)
    sum=0
    for j in range(1,factorslimmit+1):
        if i%j==0:
            sum+=j
    if sum==i:
        number.append(i)
print(number)
```

[6, 28, 496]

In [ ]: