

# Problem 1-1 nlgn

February 3, 2023

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[34]: from math import *
N=1
n=1

t= 3.16*pow(10,15)
while n * log(n, 2) < t:

    N += 1
    def findFactSum(N):
        f = 1
        Sum = 0
        for i in range(1, N + 1):
            f = f * i
            Sum += f
        return Sum
    n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    while n * log(n, 2) > t:
        s=7
        n-=pow(10,s)
        #s+=1
    #Scientific Notation
    print("{:e}".format(n))
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6.874595e+13

```
[35]: from math import *
N=1
n=1

t= 3.15*pow(10,13)

while n * log(n, 2) < t:

    N += 1
```

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def findFactSum(N):
    f = 1
    Sum = 0
    for i in range(1, N + 1):
        f = f * i
        Sum += f
    return Sum
n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    while n * log(n, 2) > t:
        s=5
        n-=pow(10,s)
        #s+=1
#Scientific Notation
print("{:e}".format(n))

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7.967553e+11

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[39]: from math import *
N=1
n=1

t= 2.59*pow(10,12)

while n * log(n, 2) < t:

    N += 1
    def findFactSum(N):
        f = 1
        Sum = 0
        for i in range(1, N + 1):
            f = f * i
            Sum += f
        return Sum
    n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    while n * log(n, 2) > t:
        s=4
        n-=pow(10,s)
        #s+=1
#Scientific Notation

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print("{:e}".format(n))
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7.181753e+10

```
[40]: from math import *
N=1
n=1

t= 8.64*pow(10,10)

while n * log(n, 2) < t:

    N += 1
    def findFactSum(N):
        f = 1
        Sum = 0
        for i in range(1, N + 1):
            f = f * i
            Sum += f
        return Sum
    n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    while n * log(n, 2) > t:
        s=3
        n-=pow(10,s)
        #s+=1
    #Scientific Notation
    print("{:e}".format(n))
```

2.755147e+09

```
[41]: from math import *
N=1
n=1

t= 3.6*pow(10,9)

while n * log(n, 2) < t:

    N += 1
    def findFactSum(N):
        f = 1
        Sum = 0
        for i in range(1, N + 1):
            f = f * i
```

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        Sum += f
    return Sum
n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    while n * log(n, 2) > t:
        s=2
        n-=pow(10,s)
        #s+=1
#Scientific Notation
    print("{:e}".format(n))

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1.333780e+08

```

[42]: from math import *
N=1
n=1

t= 6*pow(10,7)

while n * log(n, 2) < t:

    N += 1
    def findFactSum(N):
        f = 1
        Sum = 0
        for i in range(1, N + 1):
            f = f * i
            Sum += f
        return Sum
    n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    while n * log(n, 2) > t:
        s=1
        n-=pow(10,s)
        #s+=1
    #Scientific Notation
    print("{:e}".format(n))

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2.801412e+06

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[43]: from math import *
N=1

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n=1
t= 1*pow(10,6)

while n * log(n, 2) < t:

    N += 1
    def findFactSum(N):
        f = 1
        Sum = 0
        for i in range(1, N + 1):
            f = f * i
            Sum += f
        return Sum
    n = findFactSum(N)

while n * log(n, 2) > t:

    n -= 1
    #s+=1
#Scientific Notation
print("{:e}".format(n))

```

6.274600e+04

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