```
DD[n_, k_] := Sum[ DD[n / j, k - 1], {j, 1, n}]
DD[n_, 0] := 1
DD[100, 4]
```

3575

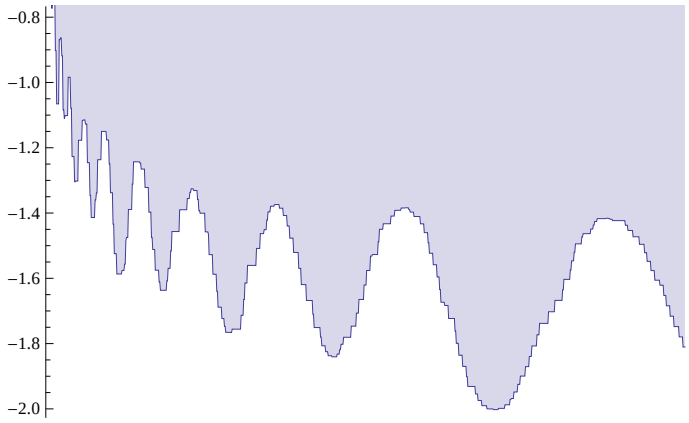
```
PP[n_, k_, a_ ] :=
 Sum[ a N[ MangoldtLambda[j] / Log[j]] ( 1 / (k !) + PP[n / j,  k + 1, a]), {j, 2, n}]
PP[100, 1, 4]
P2[ n_, a_ ] := PP[n, 1, a]
P2[ 100, 3]
DD[100, 3]
P2[100,  I]
P3[n_, k_ ] := P2[n, k] / k
DiscretePlot[Re[ P3[j, I] + P3[j, -I]], {j, 2, 100}]
```

```
QQ[n_, k_, a_ ] := QQ[n, k, a] = Sum[ j^a ( 1 / k - QQ[Floor[n / j],  k + 1, a]), {j, 2, n}]
Q2[ n_, a_ ] := 1 + QQ[n, 1, -a]
Q3[n_, k_, j_ ] := (Q2[ n,  k + j I] + Q2[n, k - j I]) / 2
```

```
QQ[100, .5, 1]
```

4438.86

```
DiscretePlot[ Q3[n, .5, 14.134725141734695` ], {n, 2, 1000}]
```




```
N[ZetaZero[1]]
```

0.5 + 14.1347 i