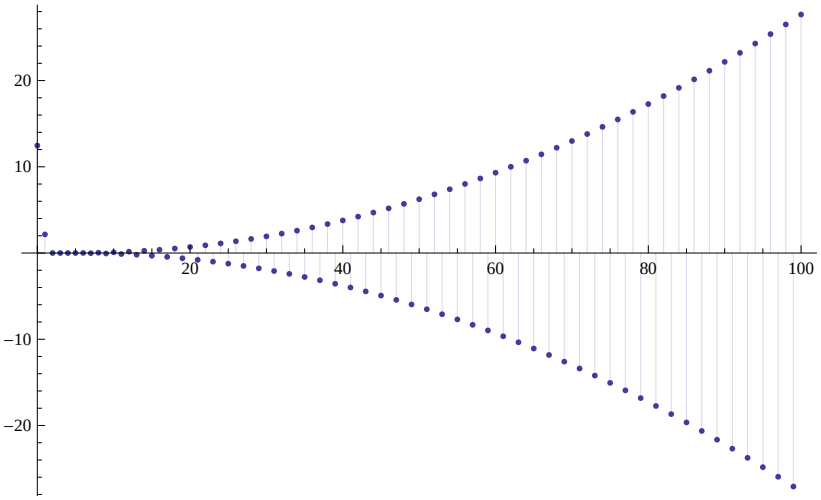
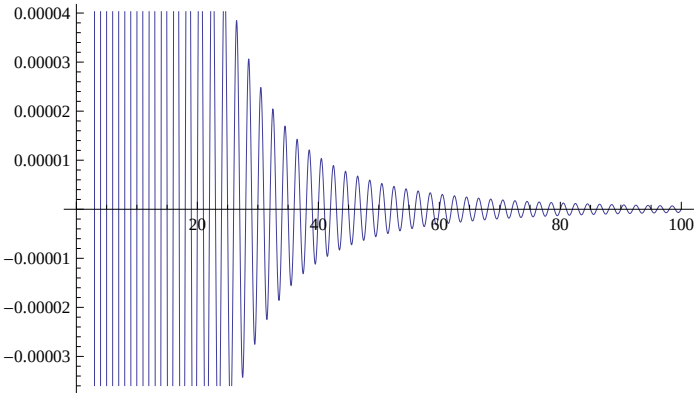
```
PS[n_] := PS[n] = FullSimplify[MangoldtLambda[n] / Log[n]]

DD[n_, k_, a_] := DD[n, k, a] = Sum[PS[j] (a^k / k! + DD[n / j, k + 1, a]), {j, 2, n}]

Dd[n_, a_] := Dd[n, a] = DD[n, 1, a] - DD[n - 1, 1, a]

D2[n_, k_] := Sum[D2[n / j, k - 1], {j, 2, n}]

D2[n_, 0] := 1

Dd2[n_, k_] := D2[n, k] - D2[n - 1, k]

Ds[n_, k_] := Sum[(-1)^j Binomial[k, k - j] Dd[n, k - j], {j, 0, 50000}]

Ds[8, 2]
```

2

```
DA[n_, k_, j_] := (-1)^j Binomial[k, k - j] Dd[n, k - j]
DB[n_, k_, j_] := Binomial[k, k - j] Dd[n, k - j]
DR[n_, k_] := Sum[Binomial[k, k - j] Dd[n, k - j], {j, 0, 3000}]

DiscretePlot[DB[72, 2.02, j], {j, 0, 100, 1}]
```




```
Plot[Binomial[2, 2 - x], {x, 0, 100}]
```




```
Binomial[4, 4 - 100.1]
```

2.59971×10^{-10}

```
DiscretePlot[DR[8, j], {j, 1, 4, .1}]
```