

```

g[n_, k_, a_] := Sum[ ((-1)^(m+1))^(k-j) Binomial[k, j] g[Floor[n/m^(k-j)], j, m+1],
  {m, a, n^(1/k)}, {j, 0, k-1}];
g[n_, 1, a_] := ((-1)^(n+1) + (-1)^(a+1)) / 2
g[n_, 0, a_] := 1
LAdd[n_] := Sum[ 2^k / k, {k, 1, Log[2, n]}]
LinE[n_] := LAdd[n] + Sum[ (-1)^(k+1) / k g[n, k, 2], {k, 1, Log[2, n]}]

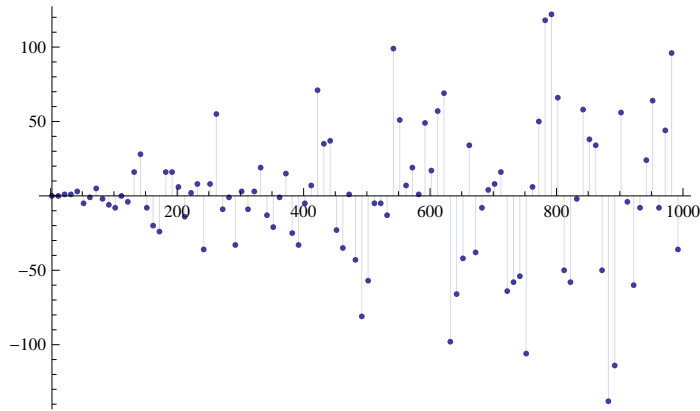
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LinE[101]
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443

15

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DiscretePlot[ g[n, 4, 2], {n, 2, 1000, 10}]
```



```

E1[n_, k_, x_] := Sum[E1[n/j, k-1, x], {j, 1, n}] - x Sum[E1[n/(x j), k-1, x], {j, 1, n/x}];
E1[n_, 0, x_] := 1
E1a[n_, x_] := Sum[ 1, {j, 1, n}, {k, 1, n/j}] - x Sum[ 1, {j, 1, n}, {k, 1, n/(j x)}] -
  x Sum[ 1, {j, 1, n/x}, {k, 1, n/(j x)}] + x^2 Sum[ 1, {j, 1, n/x}, {k, 1, n/(j x x)}]
E1b[n_, x_] := Sum[ 1, {j, 1, n}, {k, 1, n/j}] - 2 x Sum[ 1, {j, 1, n}, {k, 1, n/(j x)}] +
  x^2 Sum[ 1, {j, 1, n/x}, {k, 1, n/(j x x)}]
E2[n_, k_, x_] := Sum[E2[n/j, k-1, x], {j, 2, n}] - x Sum[E2[n/(x j), k-1, x], {j, 1, n/x}];
E2[n_, 0, x_] := 1
E2a[n_, x_] := Sum[ 1, {j, 2, n}, {k, 2, n/j}] - x Sum[ 1, {j, 2, n}, {k, 1, n/(j x)}] -
  x Sum[ 1, {j, 1, n/x}, {k, 2, n/(j x)}] + x^2 Sum[ 1, {j, 1, n/x}, {k, 1, n/(j x x)}]
E2b[n_, x_] := Sum[ 1, {j, 2, n}, {k, 2, n/j}] - 2 x Sum[ 1, {j, 2, n}, {k, 1, n/(j x)}] +
  x^2 Sum[ 1, {j, 1, n/x}, {k, 1, n/(j x x)}]

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E1[217, 2, 1.07]
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10.3927

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E1a[217, 1.07]
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10.3927

```
E1b[217, 1.07]
```

10.3927

```
E2[217, 2, 1.07]
```

9.6727

```
E2a[217, 1.07]
```

9.6727

E2b[217, 1.07]

9.6727