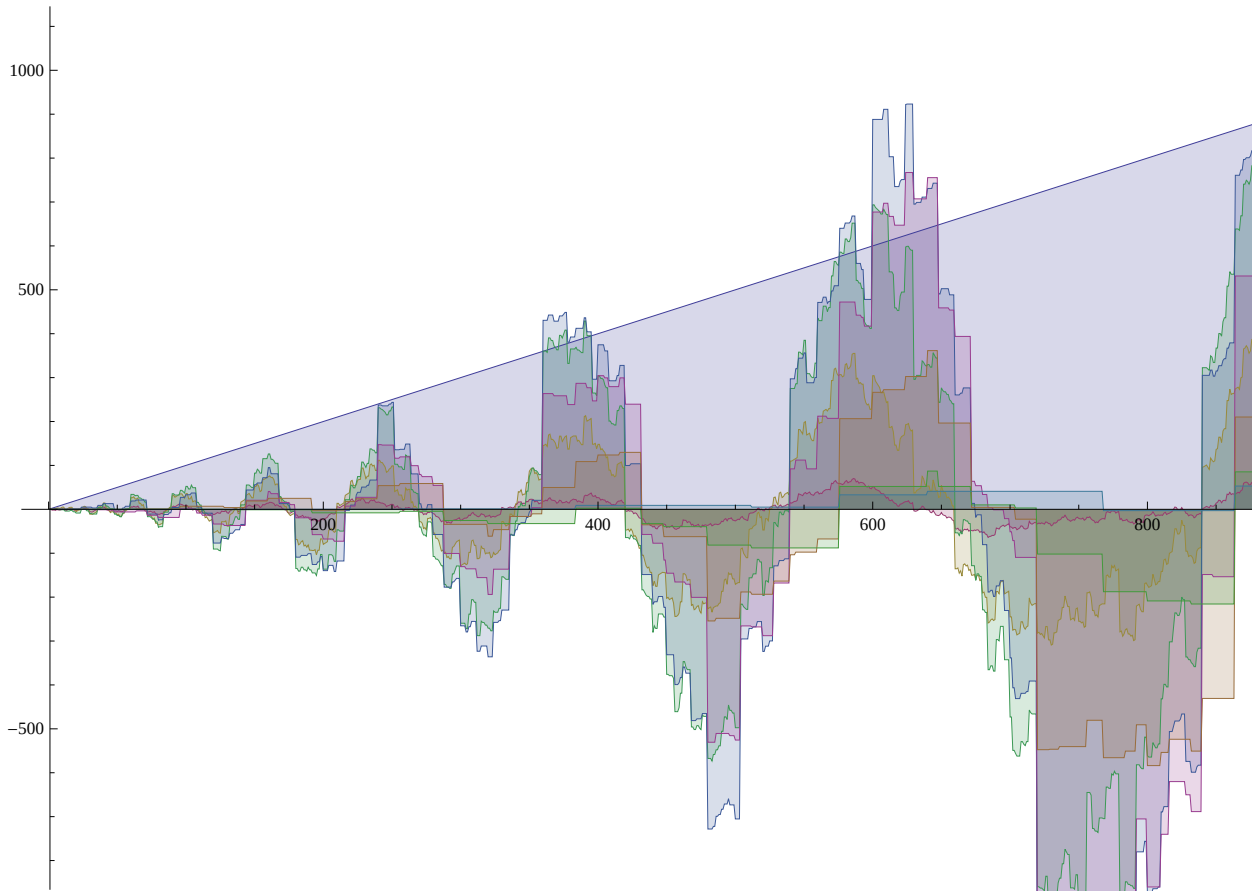
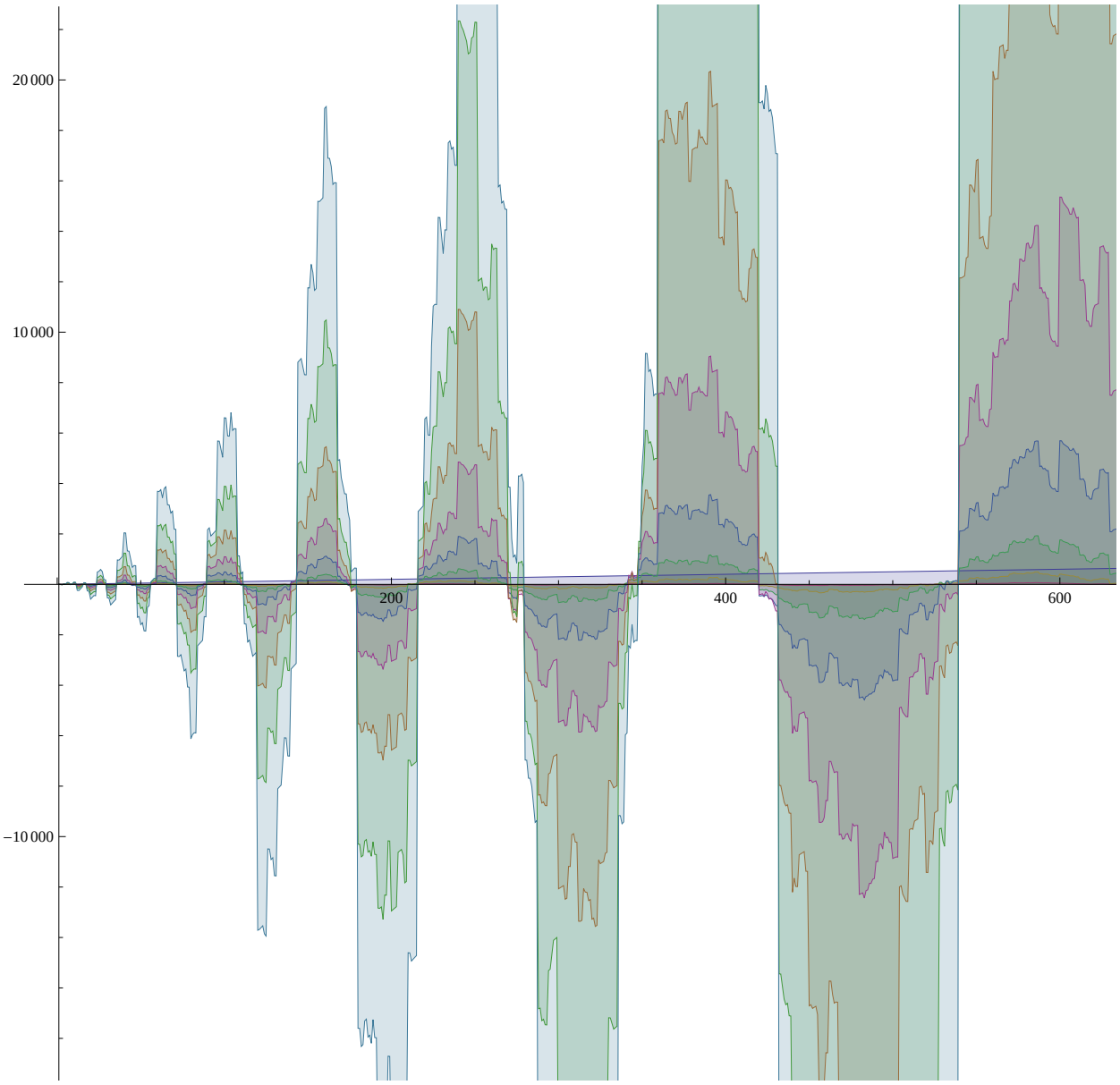
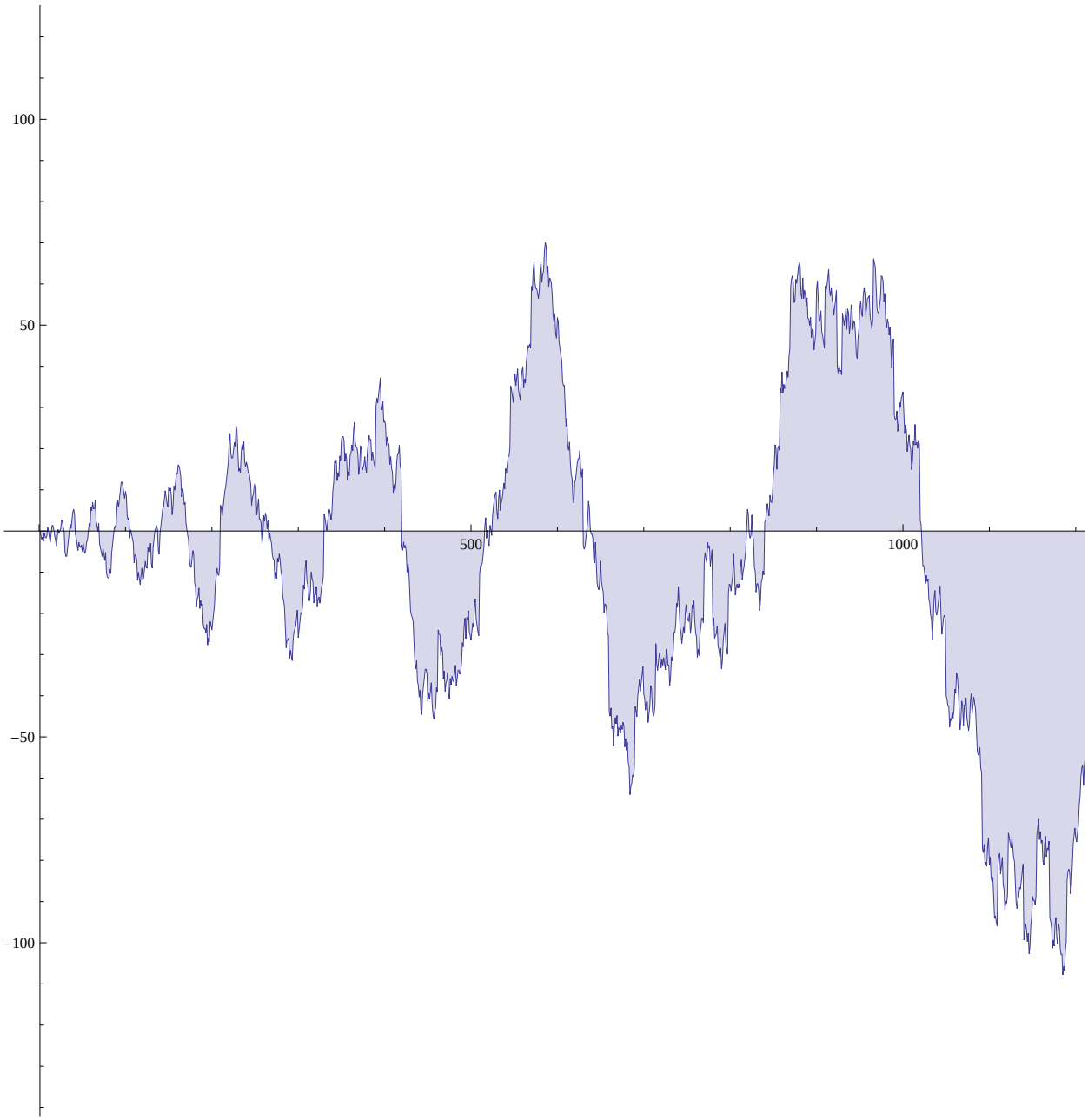
```
ClearAll["Global`*"]
d2[n_, k_] := d2[n, k] = Sum[d2[j, k - 1] d2[n / j, 1], {j, Divisors[n]}];
d2[n_, 1] := MoebiusMu[n]; d2[1, 1] := 0; d2[n_, 0] := 0; d2[1, 0] := 1
D2[n_, k_] := D2[n, k] = D2[n - 1, k] + d2[n, k]; D2[1, k_] := 0
K[n_] := K[n] = FullSimplify[MangoldtLambda[n] / Log[n]]
k2[n_, k_] := k2[n, k] = Sum[k2[j, k - 1] k2[n / j, 1], {j, Divisors[n]}];
k2[n_, 1] := K[n]; k2[1, 1] := 0; k2[n_, 0] := 0; k2[1, 0] := 1
K2[n_, k_] := K2[n, k] = K2[n - 1, k] + k2[n, k]; K2[1, k_] := 0
e2[n_, 1] := e2[n, 1] = Sum[ 1 / (k!) d2[n, k], {k, 0, Log[2, n]}]; e2[1, 1] := 0;
e2[n_, k_] := Sum[e2[j, k - 1] e2[n / j, 1], {j, Divisors[n]}]; e2[n_, 0] := 0; e2[1, 0] := 1
E2[n_, k_] := E2[n, k] = E2[n - 1, k] + e2[n, k]; E2[1, k_] := 0
E1[n_, k_] := Sum[ Binomial[k, j] E2[n, j], {j, 0, k}]
DiscretePlot[
 {E2[n, 1], E2[n, 2], E2[n, 3], E2[n, 4], E2[n, 5], E2[n, 6], E2[n, 7], E2[n, 8]}, {n, 1, 1000}]
DiscretePlot[ {E1[n, 1], E1[n, 2], E1[n, 3], E1[n, 4],
  E1[n, 5], E1[n, 6], E1[n, 7], E1[n, 8]}, {n, 1, 1000}]
DiscretePlot[ {E1[n, 1]}, {n, 1, 2000}]
```




20 000
10 000
−10 000
200
400
600




```
N[E2[2000, 1]]
```

```
360.133
```