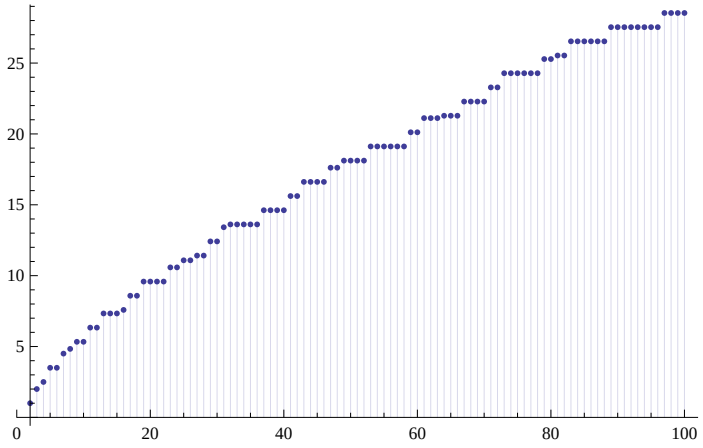
```
ClearAll["Global`*"]
```

```
vv := 2
K[n_] := If[ n == 1, 0, FullSimplify[MangoldtLambda[n] / Log[n]]]
K6[n_] := K[n] - If[ Floor[Log[vv, n]] == Log[vv, n], n / Log[vv, n], 0]
P[n_, 0] = 1;
P[n_, k_] := P[n, k] = Sum[ K[j] P[Floor[n / j], k - 1], {j, 2, n}]
En[n_] := En[n] = Sum[ 1 / (k!) P[n, k], {k, 0, Log[2, n]}]
En[n_, z_] := En[n] = Sum[ (z^k) / (k!) P[n, k], {k, 0, Log[2, n]}]
en[n_] := En[n] - En[n - 1]
LAdd[n_] := Sum[ vv^k / k, {k, 1, Log[vv, n]}]
LAdd2[n_] := Sum[(-1)^k vv^k, {k, 1, Log[vv, n]}]
PP[n_, k_] := PP[n, k] = Sum[ 1 / k - PP[Floor[n / j], k + 1], {j, 2, n}]
```

```
P[100, 1]
```

$$\frac{428}{15}$$

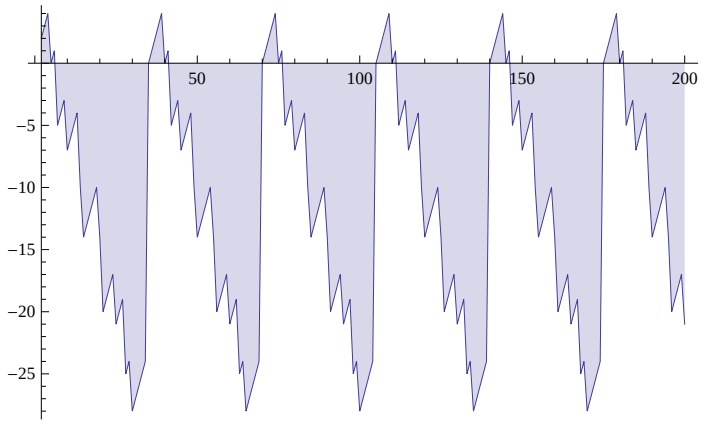
```
DiscretePlot[{P[n, 1]}, {n, 2, 100}]
```



```
Table[{n, en[n]}, {n, 2, 50}] // TableForm
```

2	1
3	1
4	1
5	−4
6	1
7	−6
8	1
9	1
10	−4
11	1
12	1
13	1
14	−6
15	−4
16	1
17	1
18	1
19	1
20	−4
21	−6
22	1
23	1
24	1
25	−4
26	1
27	1
28	−6
29	1
30	−4
31	1
32	1
33	1
34	1
35	24
36	1
37	1
38	1
39	1
40	−4
41	1
42	−6
43	1
44	1
45	−4
46	1
47	1
48	1
49	−6
50	−4

```
DiscretePlot[En[n], {n, 2, 200}]
```




```
Table[ {n, En[n], Mod[n, vv]}, {n, 1, 100}] // TableForm
```

1	1	1
2	2	2
3	3	3
4	4	4
5	0	5
6	1	6
7	−5	0
8	−4	1
9	−3	2
10	−7	3
11	−6	4
12	−5	5
13	−4	6
14	−10	0
15	−14	1
16	−13	2
17	−12	3
18	−11	4
19	−10	5
20	−14	6
21	−20	0
22	−19	1
23	−18	2
24	−17	3
25	−21	4
26	−20	5
27	−19	6
28	−25	0
29	−24	1
30	−28	2
31	−27	3
32	−26	4
33	−25	5
34	−24	6
35	0	0
36	1	1

37	2	2
38	3	3
39	4	4
40	0	5
41	1	6
42	−5	0
43	−4	1
44	−3	2
45	−7	3
46	−6	4
47	−5	5
48	−4	6
49	−10	0
50	−14	1
51	−13	2
52	−12	3
53	−11	4
54	−10	5
55	−14	6
56	−20	0
57	−19	1
58	−18	2
59	−17	3
60	−21	4
61	−20	5
62	−19	6
63	−25	0
64	−24	1
65	−28	2
66	−27	3
67	−26	4
68	−25	5
69	−24	6
70	0	0
71	1	1
72	2	2
73	3	3
74	4	4
75	0	5
76	1	6
77	−5	0
78	−4	1
79	−3	2
80	−7	3
81	−6	4
82	−5	5
83	−4	6
84	−10	0
85	−14	1
86	−13	2
87	−12	3
88	−11	4
89	−10	5
90	−14	6
91	−20	0
92	−19	1

```
93     -18    2
94     -17    3
95     -21    4
96     -20    5
97     -19    6
98     -25    0
99     -24    1
100    -28    2
```

```
DiscretePlot[P[n, 1] - PP[n, 1] + LAdd[n] + LAdda[n], {n, 2, 100}]
```