

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

```
vv := 2
```

```
K[n_] := If[n == 1, 0, FullSimplify[MangoldtLambda[n] / Log[n]]]
```

```
K2[n_] := If[Floor[n^(1/2)] == n^(1/2), K[n^(1/2)], 0]
```

```
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[K2[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]}]
```

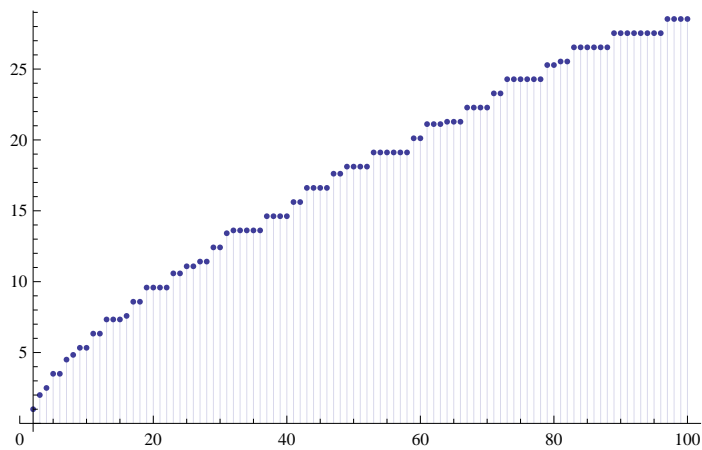
```
PP[n_, k_] := PP[n, k] = Sum[1 / k - PP[Floor[n/j], k + 1], {j, 2, n}]
```

```
P[10000, 1]
```

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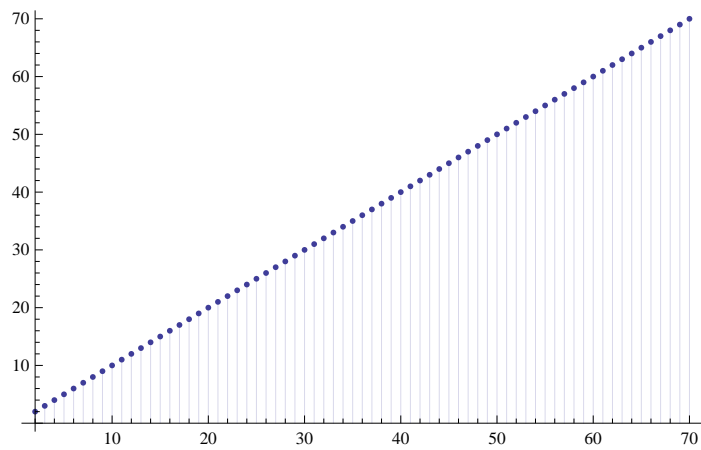
```
DiscretePlot[{P[n^2, 1]}, {n, 2, 100}]
```



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

2	0
3	0
4	1
5	0
6	0
7	0
8	0
9	1
10	0
11	0
12	0
13	0
14	0
15	0
16	1
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	1
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	1
37	0
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	1
50	0

```
DiscretePlot[En[n^2], {n, 2, 70}]
```



```
Table[{n, En[n], Floor[n^(1/2)]}, {n, 1, 100}] // TableForm
```

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

36	6	6
37	6	6
38	6	6
39	6	6
40	6	6
41	6	6
42	6	6
43	6	6
44	6	6
45	6	6
46	6	6
47	6	6
48	6	6
49	7	7
50	7	7
51	7	7
52	7	7
53	7	7
54	7	7
55	7	7
56	7	7
57	7	7
58	7	7
59	7	7
60	7	7
61	7	7
62	7	7
63	7	7
64	8	8
65	8	8
66	8	8
67	8	8
68	8	8
69	8	8
70	8	8
71	8	8
72	8	8
73	8	8
74	8	8
75	8	8
76	8	8
77	8	8
78	8	8
79	8	8
80	8	8
81	9	9
82	9	9
83	9	9
84	9	9
85	9	9
86	9	9
87	9	9
88	9	9
89	9	9
90	9	9
91	9	9

92	9	9
93	9	9
94	9	9
95	9	9
96	9	9
97	9	9
98	9	9
99	9	9
100	10	10