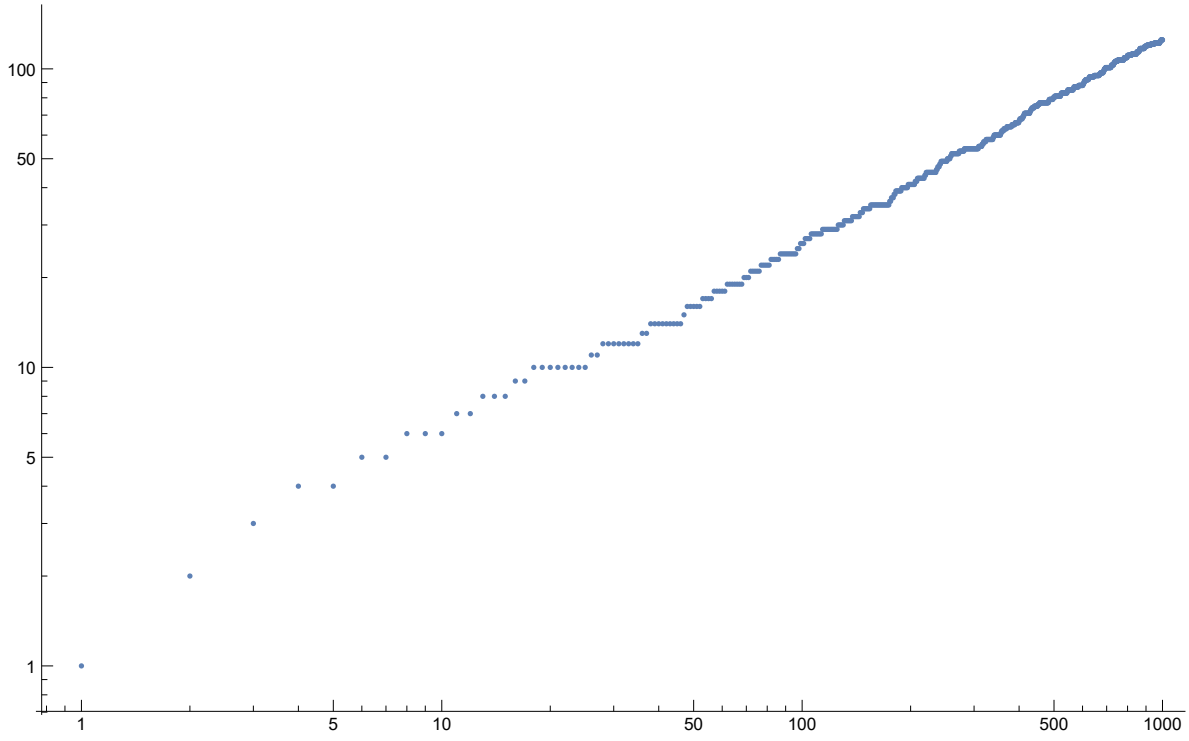
Pensieve header: Figuring out wacky numbers, following Itai and Tsimerman.

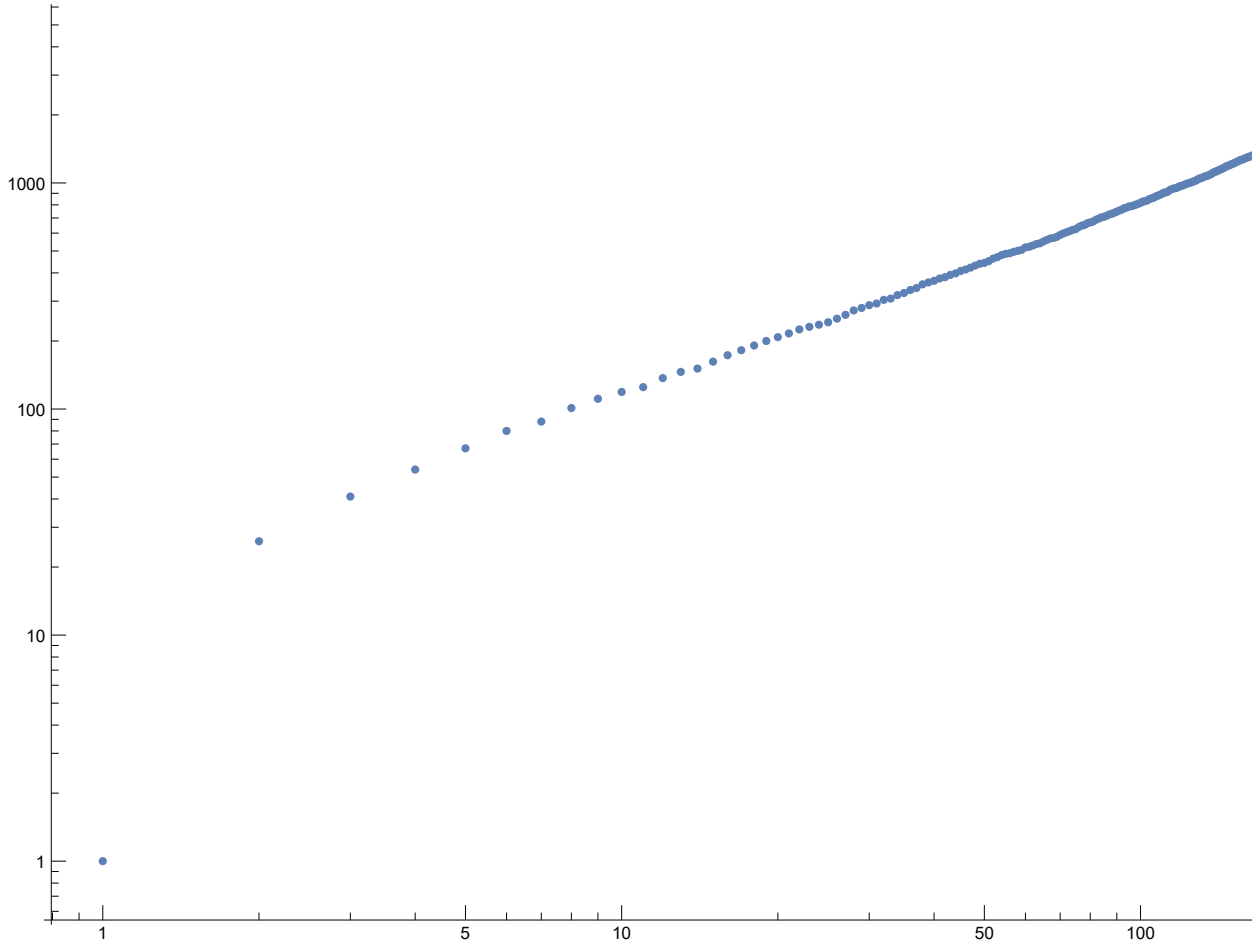
```
WackyQ[1] = WackyQ[2] = True;
WackyQ[n_] /; n > 2 := WackyQ[n] = Module[{k, ws = 0},
    For[k = 1, k < n/2 ⋀ ws < 2, ++k, If[WackyQ[k] ⋀ WackyQ[n - k], ++ws]];
    ws == 1
   ];
WackyPi[1] = 1;
WackyPi[n_] /; n > 1 := WackyPi[n] = WackyPi[n - 1] + If[WackyQ[n], 1, 0];

Select[Range[1000], WackyQ] // Length
```

```
125
```

```
ListLogLogPlot[Table[WackyPi[n], {n, 1, 1000}]]
```



```
ListLogLogPlot[Table[WackyPi[n], {n, 1, 50 000, 100}]]
```



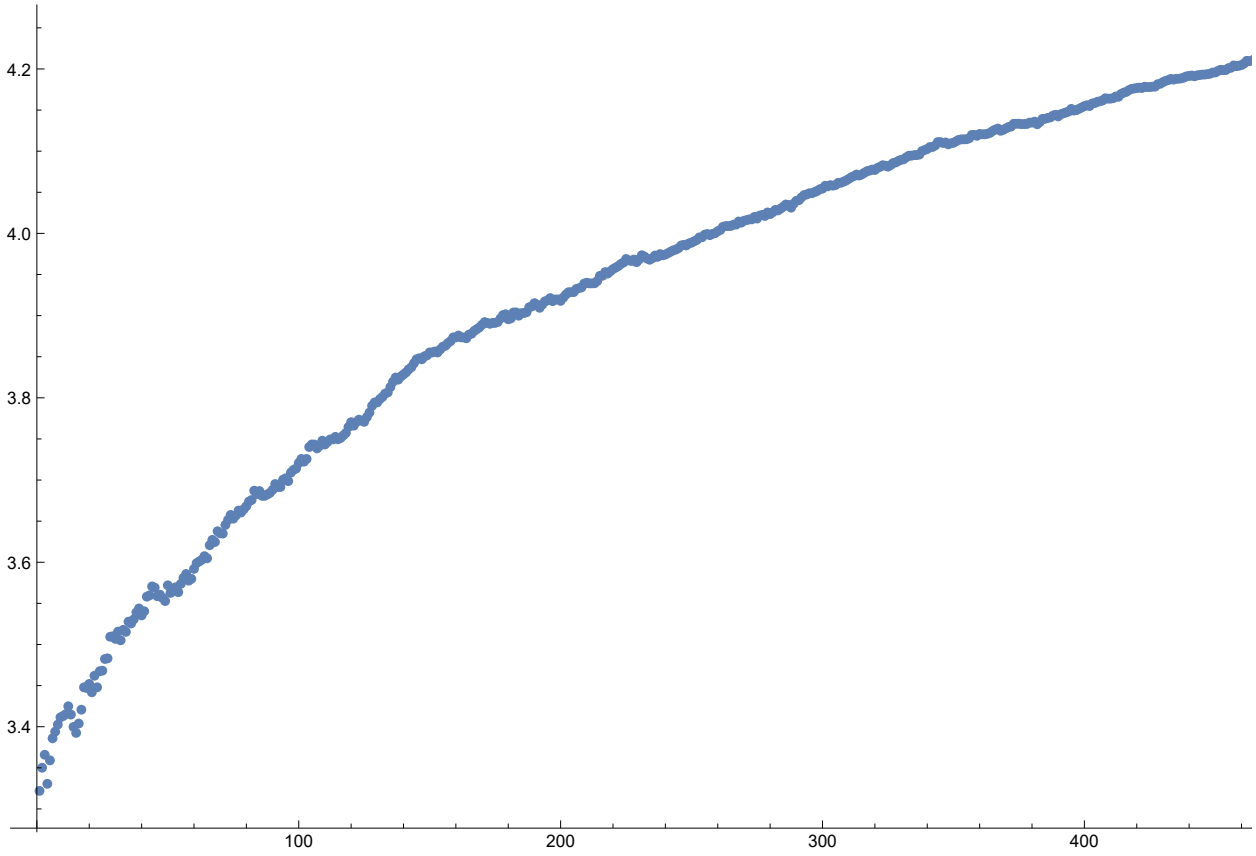

```
Log[WackyPi[50 000]] // N
     Log[50 000]
```

```
0.763486
```

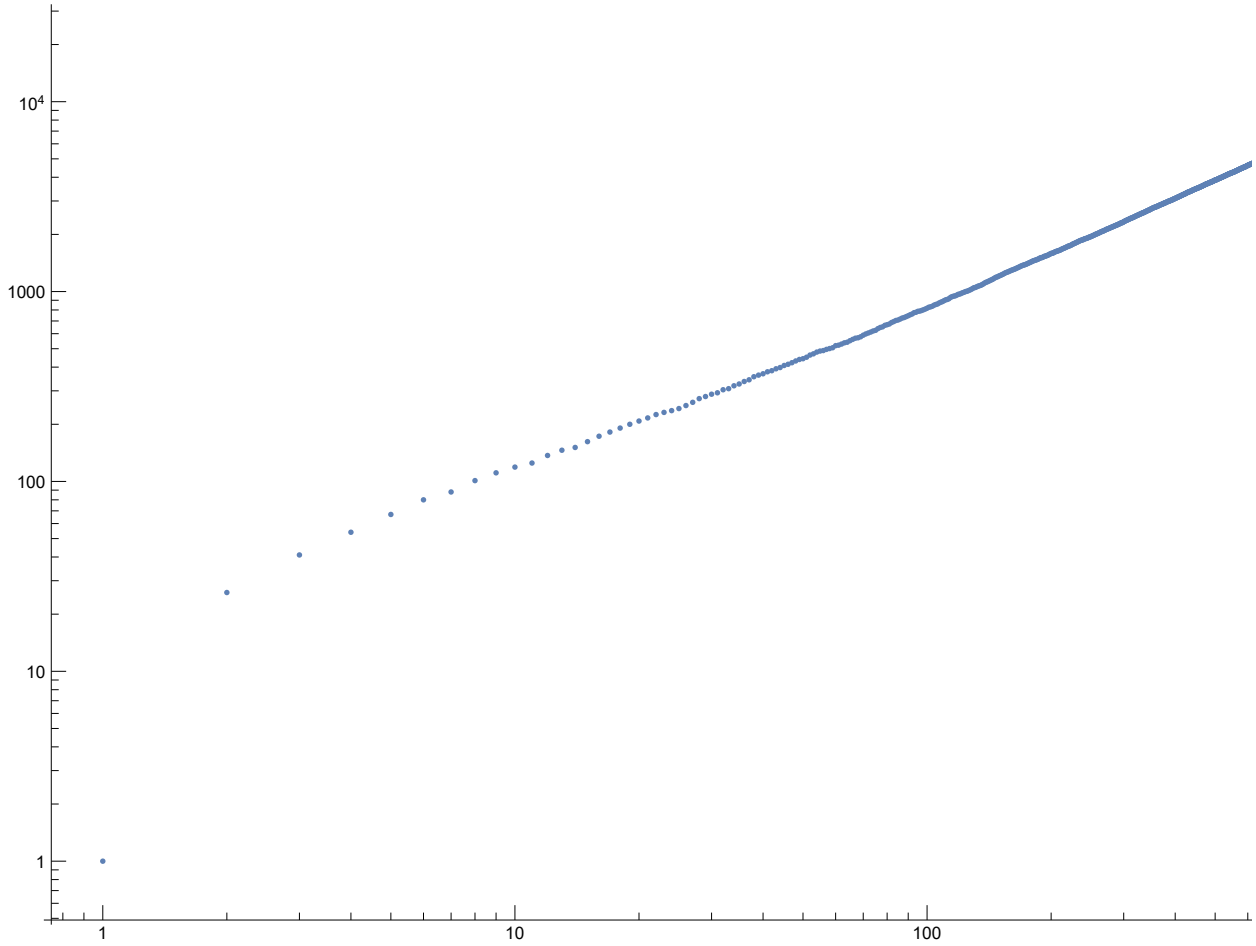
```
With[{n = 30 000}, Log[WackyPi[n]] // N]
                   Log[n]
```

```
0.752499
```

```
ListPlot[Table[(1 - Log[WackyPi[n]]/Log[n])^-1, {n, 1000, 50000, 100}]]
```



```
ListLogLogPlot[Table[WackyPi[n], {n, 1, 250 000, 100}]]
```




```
Log[WackyPi[250 000]] // N
     Log[250 000]
```

```
0.791207
```