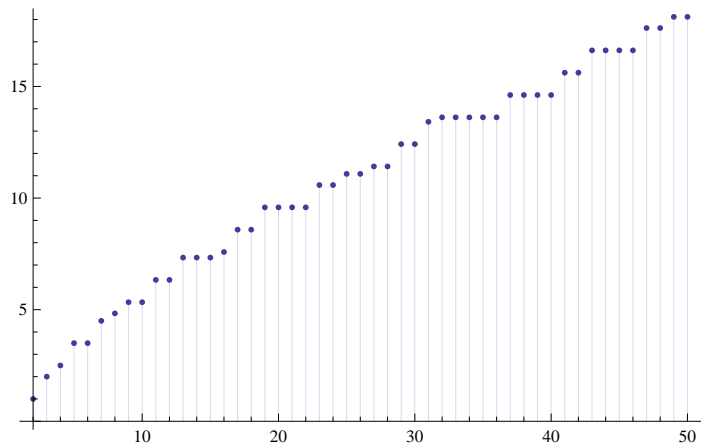```
P[n_, k_, j_] := 1 / k - P[n / j, k + 1, Floor[n / j]] + P[n, k, j - 1]
P[n_, k_, 1] := 0
```

```
DiscretePlot[P[n, 1, n], {n, 2, 50}]
```



```
N[P[10, 1, 10]]
```

5.33333

```
PPP[n_] := FullSimplify[MangoldtLambda[n] / Log[n]]
```

```
PPP[8]
```

$\dfrac{1}{3}$

```
Q[n_, k_, j_] := PPP[j] (1 / (k!) + Q[n / j, k + 1, Floor[n / j]]) + Q[n, k, j - 1]
Q[n_, k_, 1] := 0
```
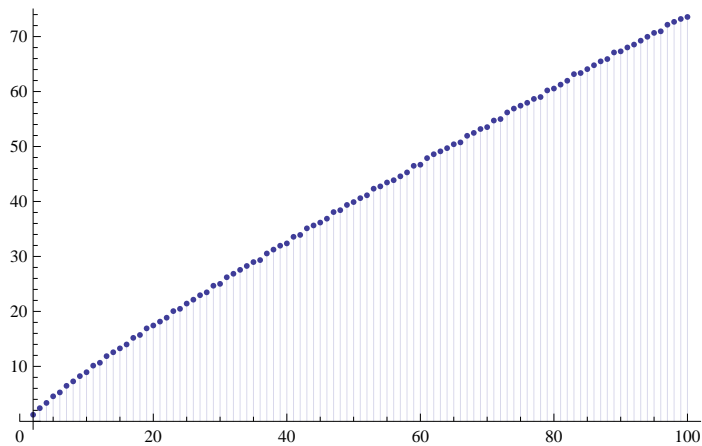
```
Q[110, 1, 110]
```

109

```
DiscretePlot[ Re[Q[n, 1 - I, n]], {n, 2, 100}]
```
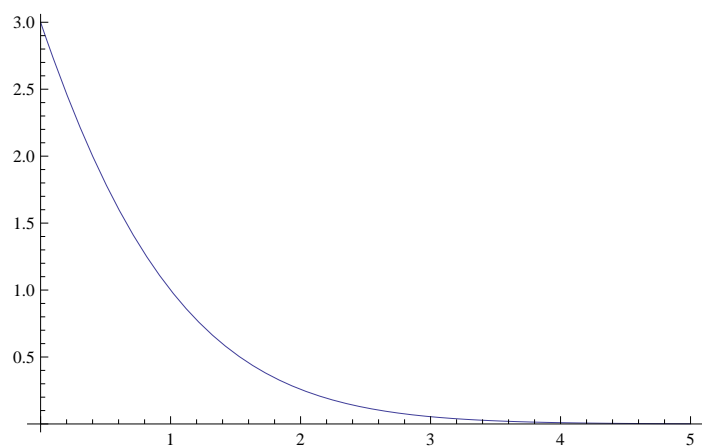


```
Simplify[Q[101, k, 101] - Q[100, k, 100]]
```

$\dfrac{1}{k!}$

$$\text{Plot}\left[\frac{1}{2\,(1+k)\,!} + \frac{3}{(2+k)\,!} + \frac{6}{(3+k)\,!}\,,\ \{k,\,0,\,5\}\right]$$

$$\text{Simplify}[Q[101,\,k,\,101] - Q[101,\,k+1,\,101]]$$

$$\frac{1}{360}\left(\frac{10\,632}{k\,!} + \frac{21\,946}{(1+k)\,!} + \frac{12\,107}{(2+k)\,!} - \frac{8025}{(3+k)\,!} - \frac{24\,600}{(4+k)\,!} - \frac{9540}{(5+k)\,!} - \frac{2520}{(6+k)\,!}\right)$$