```
Sum[1 / #2 - #0[# / j, #2 + 1], {j, 2, #}] & @@ {100, 1}
```

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

```
#1[10] @@ {1 - #} &
```

```
#1[10] @@ {1 - #1} &
```

```
#^2 & /@ Range[0, 10]
```

```
{0, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100}
```

```
#@19 - #@18 & /@ {MoebiusMu}
```

```
{-1}
```

```
#@23 - #@22 & /@ {1 - Sum[#0[# / j], {j, 2, #}] &}
```

```
{-1}
```

```
m[n_] := Product[If[p[[2]] > 1, 0, -1], {p, FactorInteger[n]}]


m[2]
```

```
-1
```

```
m := -1 - Sum[ If[Mod[#, j] == 0, m[# / j], 0], {j, 2, # - 1}] &

Table[ m[n], {n, 1, 20}]
```

```
{-1, -1, -1, 0, -1, 1, -1, 0, 0, 1, -1, 0, -1, 1, 1, 0, -1, 0, -1, 0}
```

```
-1 - Sum[ If[Mod[#, j] == 0, #0[# / j], 0], {j, 2, # - 1}] & @@ {30}
```

```
-1
```

```
e := Switch[#2, 0, 1, 1, Floor@# - #3, _,
   Sum[Binomial[#2, j] e[# / (m^(#2 - j)), j, m], {m, #3 + 1, #^(1 / #2)}, {j, 0, #2 - 1}]] &;
p := -Sum[e[#^(1 / j), k, 1] MoebiusMu@j (-1)^k / k / j, {j, 1, Log2@#}, {k, 1, Log2@#}] &

p[100]
```

```
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```

```
p :=
 -Sum[{Switch[#2, 0, 1, 1, Floor@# - #3, _, Sum[Binomial[#2, j] #0[# / (m^(#2 - j)), j, m], {m,
           #3 + 1, #^(1 / #2)}, {j, 0, #2 - 1}]]} @@ {#^(1 / j), k, 1}
     MoebiusMu@j (-1)^k / k / j, {j, 1, Log2@#}, {k, 1, Log2@#}] &

p[1000]
```

Function::slotn : Slot number 2 in $-\sum_{j=1}^{\text{Log2[\#1]}}\sum_{k=1}^{\text{Log2[\#1]}}\frac{1}{k\,j}$Switch[#2,
0, 1,
1, Floor[≪1≫] + Times[≪2≫],
_, Sum[Times[≪2≫], {≪3≫}, {≪3≫}]] @@ {Slot[≪1≫]^Times[≪2≫], k, 1} MoebiusMu[j] (−1)^k &
cannot be filled from $\left(-\sum_{j=1}^{\text{Log2[\#1]}}\sum_{k=1}^{\text{Log2[\#1]}}\frac{1}{k\,j}\text{Switch[\#2,}\right.$
0, 1,
1, Floor[≪1≫] + Times[≪2≫],
_, Sum[Times[≪2≫], {≪3≫}, {≪3≫}]] @@ {Slot[≪1≫]^Times[≪2≫], k, 1} MoebiusMu[j] (−1)^k &[1000].
≫

Function::slotn : Slot number 3 in $-\sum_{j=1}^{\text{Log2[\#1]}}\sum_{k=1}^{\text{Log2[\#1]}}\frac{1}{k\,j}$Switch[#2,
0, 1,
1, Floor[≪1≫] + Times[≪2≫],
_, Sum[Times[≪2≫], {≪3≫}, {≪3≫}]] @@ {Slot[≪1≫]^Times[≪2≫], k, 1} MoebiusMu[j] (−1)^k &
cannot be filled from $\left(-\sum_{j=1}^{\text{Log2[\#1]}}\sum_{k=1}^{\text{Log2[\#1]}}\frac{1}{k\,j}\text{Switch[\#2,}\right.$
0, 1,
1, Floor[≪1≫] + Times[≪2≫],
_, Sum[Times[≪2≫], {≪3≫}, {≪3≫}]] @@ {Slot[≪1≫]^Times[≪2≫], k, 1} MoebiusMu[j] (−1)^k &[1000].
≫

Function::slotn : Slot number 2 in $-\sum_{j=1}^{\text{Log2[\#1]}}\sum_{k=1}^{\text{Log2[\#1]}}\frac{1}{k\,j}$Switch[#2,
0, 1,
1, Floor[≪1≫] + Times[≪2≫],
_, Sum[Times[≪2≫], {≪3≫}, {≪3≫}]] @@ {Slot[≪1≫]^Times[≪2≫], k, 1} MoebiusMu[j] (−1)^k &
cannot be filled from $\left(-\sum_{j=1}^{\text{Log2[\#1]}}\sum_{k=1}^{\text{Log2[\#1]}}\frac{1}{k\,j}\text{Switch[\#2,}\right.$
0, 1,
1, Floor[≪1≫] + Times[≪2≫],
_, Sum[Times[≪2≫], {≪3≫}, {≪3≫}]] @@ {Slot[≪1≫]^Times[≪2≫], k, 1} MoebiusMu[j] (−1)^k &[1000].
≫

General::stop : Further output of Function::slotn will be suppressed during this calculation. ≫

$RecursionLimit::reclim : Recursion depth of 256 exceeded. ≫

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General::stop : Further output of $RecursionLimit::reclim will be suppressed during this calculation. ≫

$IterationLimit::itlim : Iteration limit of 4096 exceeded. ≫

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$IterationLimit::itlim : Iteration limit of 4096 exceeded. ≫

General::stop : Further output of $IterationLimit::itlim will be suppressed during this calculation. ≫

```
e := Switch[#2, 0, 1, 1, Floor@# - #3, _,
   Sum[Binomial[#2, j] e[# / (m^(#2 - j)), j, m], {m, #3 + 1, #^(1 / #2)}, {j, 0, #2 - 1}]] &;
-Sum[e[#^(1 / j), k, 1] MoebiusMu@j (-1)^k / k / j, {j, 1, Log2@#}, {k, 1, Log2@#}] &@@ {1000}
```

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```
e := Switch[#2, 0, 1, 1, Floor@# - #3, _,
   Sum[Binomial[#2, j] e[# / (m^(#2 - j)), j, m], {m, #3 + 1, #^(1 / #2)}, {j, 0, #2 - 1}]] &;
-Sum[e[#^(1 / j), k, 1] MoebiusMu@j (-1)^k / k / j, {j, 1, Log2@#}, {k, 1, Log2@#}] &@@ {1000}
```

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