```
StrictDivisors[A_, n_, k_] := Sum[j^A StrictDivisors[A, n / j, k - 1], {j, 2, n}]
StrictDivisors[A_, n_, 1] := Sum[j^A, {j, 2, n}]
CountPrimes[A_, n_] :=
 Sum[(-1)^(k + 1) / (j k) MoebiusMu[j] StrictDivisors[j A, n^(1 / j), k],
  {j, 1, Log[2, n]}, {k, 1, Log[2, (n^(1 / j))]}]
RecurseCount[A_, n_, k_] := Sum[j^A (1 / k - RecurseCount[A, n / j, k + 1]), {j, 2, n}]
CountPrimeSumsRecurse[A_, n_] :=
 Sum[1 / (j) MoebiusMu[j] RecurseCount[j A, n^(1 / j), 1], {j, 1, Log[2, n]}]
DivisorsHyperbola[A_, k_, n_, s_] :=
 Sum[((m^A)^(k - j)) Binomial[k, j] DivisorsHyperbola[A, j, n / (m^(k - j)), m + 1],
  {m, s, n^(1 / k)}, {j, 0, k - 1}]
DivisorsHyperbola[A_, 1, n_, s_] := Sum[j^A, {j, s, n}]
DivisorsHyperbola[A_, 0, n_, s_] := 1
CountPrimes2[n_, a_] :=
 Sum[(-1)^(k + 1) / (j k) MoebiusMu[j] DivisorsHyperbola[j a, k, n^(1 / j), 2],
  {j, 1, Log[2, n]}, {k, 1, Log[2, (n^(1 / j))]}]
```

```
CountPrimes2[100, 1]
```

```
1060
```

```
CountPrimes[1, 100]
```

```
1060
```

```
CountPrimeSumsRecurse[1, 100]
```

```
1060
```