

Perl Weekly Challenge - 023, Task #2 • Mark Senn

Created: 19-09-01 19:30 +00 • Last Revised: 2019-09-01 20:16 +00

From [Perl Weekly Challenge - 023, Task #2](#) retrieved on 2019--09--01 at 19:36 +00:

Create a script that prints **Prime Decomposition** of a given number. The prime decomposition of a number is defined as a list of prime numbers which when all multiplied together, are equal to that number. For example, the Prime decomposition of 228 is 2,2,3,19 as $228 = 2 * 2 * 3 * 19$.

Perl 6 solution

```
1 #
2 # Perl Weekly Challenge - 023
3 # Task #2
4 #
5 # See
6 #     engineering.purdue.edu/~mark/blog/pwc-023-2.pdf
7 # for more information.
8 #
9
10 # Run using Perl v6.d.
11 use v6.d;
12
13 my $n = 228;      # number to factor
14
15 # for 2, 3, 5, 7, ..., if the number is prime enter the loop
16 for (2, 3, *+2 ... *).grep({.is-prime}) -> $p {
17
18     while $n %% $p {      # $n evenly divisible by the current prime?
19         say $p;          #     print the prime
20         $n div= $p;      #     divide $n by the prime
21     }
22
23     # Is $p > $n.sqrt?
24     # But, I suspect $p ** 2 > $n, is faster to compute.
25     if ($p ** 2 > $n) {
26         $n.say;
27         last;
28     }
29
30 }
```

History

2019-09-01 Finished first version.