

Semiprimes • [Mark Senn](#) • last updated 2021-12-23 18:40-05

Problem Statement

From [The Weekly Challenge - 144 Task #1: Semiprime](#) retrieved on 2021-12-23 at 20:03-05:

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Write a script to generate all Semiprime number ≤ 100 .

For more information about Semiprime, please checkout the [wikipedia page](#).

In mathematics, a semiprime is a natural number that is the product of exactly two prime numbers. The two primes in the product may equal each other, so the semiprimes include the squares of prime numbers.

Example

10 is Semiprime as $10 = 2 \times 5$

15 is Semiprime as $15 = 3 \times 5$

Raku Solution

I like [Raku](#) much better than [Perl](#). One reason: more expressive programming operators.

```
# Generate all semiprime numbers <= 100.
my $n = 100;

# Make a list of primes. Using primes <= $n/2 is more than enough.
my @prime = (2 .. $n/2).grep(*.is-prime);

# Multiply each prime by every other prime in the list,
# save the products that are <= 100,
# sort this list numerically,
# save the unique numbers on the list,
# and print the list.
(@prime X* @prime).grep(* <= 100).sort(+*).unique.say;
```