

Fermats hypotese

$2^{2^n} + 1$, hvor $n \in \mathbf{N}$, er et primtal!

> restart

> for n from 1 to 7 do

 ['n'=n, '2^{2ⁿ} + 1'=2^{2ⁿ} + 1, isprime(2^{2ⁿ} + 1), ifactor(2^{2ⁿ} + 1)]

end;

 [n = 1, 2^{2ⁿ} + 1 = 5, true, (5)]

 [n = 2, 2^{2ⁿ} + 1 = 17, true, (17)]

 [n = 3, 2^{2ⁿ} + 1 = 257, true, (257)]

 [n = 4, 2^{2ⁿ} + 1 = 65537, true, (65537)]

 [n = 5, 2^{2ⁿ} + 1 = 4294967297, false, (641) (6700417)]

 [n = 6, 2^{2ⁿ} + 1 = 18446744073709551617, false, (67280421310721) (274177)]

 [n = 7, 2^{2ⁿ} + 1 = 340282366920938463463374607431768211457, false,

 (59649589127497217) (5704689200685129054721)]

(1)