

The Lucas - Lehmer Test

```
tu = TimeUsed[]; z = 1; Do[n = Prime[k];  
  If[Nest[Function[s, Mod[s^2 - 2, 2^n - 1]], 4, n - 2] == 0, s = TimeUsed[] - tu;  
    z++; If[s >= 120, Print[z, "\t", n, "\t", IntegerPart[s/60], " min."],  
      Print[z, "\t", n, "\t", s, " sec."]]; , {k, 1, 10 000}]
```

2	3	0. sec.
3	5	0.015 sec.
4	7	0.015 sec.
5	13	0.015 sec.
6	17	0.015 sec.
7	19	0.015 sec.
8	31	0.015 sec.
9	61	0.015 sec.
10	89	0.015 sec.
11	107	0.015 sec.
12	127	0.015 sec.
13	521	0.187 sec.
14	607	0.234 sec.
15	1279	1.419 sec.
16	2203	5.725 sec.
17	2281	6.427 sec.
18	3217	17.784 sec.
19	4253	43.898 sec.
20	4423	49.592 sec.
21	9689	11 min.
22	9941	12 min.
23	11 213	18 min.