```
>\! L \coloneqq [2, 3, 2, 5, 7, 2, 3, 11, 13, 2, 17, 19, 23, 5, 3, 29, 31, 2, 37, 41, 43, 47, 49, 53, 59, 61, 2, 67, 71, 73, 79, 3, 83, 89, 97];
```

$$\begin{split} L &\coloneqq \\ &[2,3,2,5,7,2,3,11,13,2,17,19,23,5,3,29,31,2,37,41,43,\\ &47,49,53,59,61,2,67,71,73,79,3,83,89,97] \end{split} \tag{1}$$

> a := 3;

$$a \coloneqq 3$$
 (2)

> N := 500657;

$$N := 500657 \tag{3}$$

 $\begin{array}{l} {\hbox{$>$}} \mbox{for } num \mbox{ in } L \mbox{ do } b \coloneqq a^{num} \mod N; \\ {\hbox{if } num \mod 5 = 0$} \mbox{ then } g \coloneqq igcd(b-1,N); \\ {\hbox{if } g > 1$} \mbox{ then } print(b,num,g); \\ break; \\ {\hbox{fi fi}}; \\ a \coloneqq b; \\ {\hbox{od}}; \\ \end{array}$ 

b := 479180 a := 479180 b := 219063 a := 219063 b := 123862 a := 123862 b := 391073 391073, 5, 101(4)

>