```
1: procedure ANALYZE(profiles)
        for profile in profiles do
 2:
            r \leftarrow a \bmod b
 3:
            while r \neq 0 do
 4:
 5:
                a \leftarrow b
                b \leftarrow r
 6:
                r \leftarrow a \bmod b
7:
            end while
 8:
            return b
9:
10:
        end for
11: end procedure
```