

Puzzle #3

I. Suppose you are using an encryption protocol that uses 512-bit keys. If you wanted to adopt a new protocol that would take 16 times longer for a purely brute-force attack, how many additional bits should be added to the keys?

Answer: 4

II. How many binary bits are needed to store a single extended (padded) ASCII character?

Answer: 8

III. How many binary bits are required to store the value of a Boolean variable?

Answer: 1

IV. What is the value of "a" after running the following algorithm?

```
a ← 6
b ← a/3
a ← a*b
b ← a - b
a ← b
a ← a/2
```

Answer: 5

Use this code to open the 4-digit lock, and then go to tinyurl.com/satoshi4815 for the next puzzle.