

**Exercise 1**

Find the small secret exponent and decrypt the messages.

If the 4096 bit key takes too long, think of ways to improve the speed.

**Exercise 2**

Forge a signature for the magic words in the given code, to prove worthy of getting a flag. You can access the service via

```
nc 130.149.230.69 10302
```

The code is on Isis. To test it locally, compile with

```
gcc magic_words.c -lgmp -o magic_words
```

**Exercise 3**

Given the signature oracle, make Alice admit her love for cookies. The oracle is accessible via

```
nc 130.149.230.69 10301
```

See Isis for the code.