

Exercise 1.25

Alyssa P. Hacker complains that we went to a lot of extra work in writing `expmod`. After all, she says, since we already know how to compute exponentials, we could have simply written

```
(define (expmod base exp m)
  (remainder (fast-expt base exp) m))
```

Is she correct? Would this procedure serve as well for our fast prime tester? Explain.

She's correct, but she's not necessarily making the fast prime tester *fast*. `remainder` will work very, very slow with big numbers, which is what `fast-expt` is bound to produce. `fermat-test` will, therefore, run slower than if we used the fast variant of `expmod` (which doesn't work with big numbers at all, since it passes them through `remainder` while it can still handle it.)