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# Chapter 1

## Functions

### 1.1 factor.mpqqs – MPQS

#### 1.1.1 mpqsfind

```
mpqsfind(n: integer, s: integer=0, f: integer=0, m: integer=0, verbose:  
bool=False )  
→ integer
```

Find a factor of **n** by MPQS(multiple-polynomial quadratic sieve) method.

MPQS is suitable for factorizing a large number.

Optional arguments **s** is the range of sieve, **f** is the number of factor base, and **m** is multiplier. If these are not specified, the function guesses them from **n**.

#### 1.1.2 mpqs

```
mpqs(n: integer, s: integer=0, f: integer=0, m: integer=0 )  
→ factorlist
```

Factorize **n** by MPQS method.

Optional arguments are same as **mpqsfind**.

#### 1.1.3 eratosthenes

```
eratosthenes(n: integer) → list
```

Enumerate the primes up to **n**.

# Bibliography