

Exercises

First Steps

1. Parenthesise the following numeric expressions:

(a) $2^3 * 4$

(b) $2 * 3 + 4 * 5$

(c) $2 + 3 * 4^5$

Use GHCi to check your answers.

2. The script below contains three syntactic errors. Correct these errors and then check that your script works properly using GHCi.

```
N = a 'div' length xs
  where
    a = 10
    xs = [1,2,3,4,5]
```

3. The library function *last* selects the last element of a non-empty list; for example:

$$\text{last } [1,2,3,4,5] = 5$$

Show that the function *last* could be defined in terms of the other library functions introduced so far.

4. The library function *init* removes the last element of a non-empty list; for example:

$$\text{init } [1,2,3,4,5] = [1,2,3,4]$$

Show that the function *init* could be defined in terms of the other library functions introduced so far.