

Functional Programming

Exercises Week 12

(for January 16, 2015)

1. Read Chapter 10
2. Exercise 10.1
3. Exercise 10.2
4. Exercise 10.5
5. Implement in OCaml the lazy lists corresponding to the infinite sequences

a) of triangular numbers: $a(n) = n(n + 1)/2$, that is:

0, 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, ...

b) of numbers that are not squares, that is:

2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 26, ...

Hint. You can use sequence composition and filtering.