

**LiU-FP2010 Part II, Linkping, 17–19 May 2010**  
**Exercises, Lecture 3: Purely Functional Data Structures**  
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For the examination, choose 2 of the following:

1. Write a function `drop :: Int -> RList a -> RList a` that deletes the first  $n$  elements for a binary random-access list. Your function should run in  $O(\log n)$  time. (From *Purely Functional Data Structures* by Chris Okasaki, 1998.)

2. Reimplement binary random-access lists using a sparse representation such as:

```
data Tree a = Leaf a | Node Int (Tree a) (Tree a)
type RList a = [Tree a]
```

(From *Purely Functional Data Structures* by Chris Okasaki, 1998.)

3. Implement `drop` as specified above for *skew* binary random-access lists.