Discussion 2

1. Use the **bubble sort** to sort 6, 2, 3, 1, 5, 4 showing the lists obtained at each step.

   (cf. Rosen 3.1 Exercises 34, 38, 41)

2. Consider the following pseudocode.

   ```
   \begin{align*}
   i &:= 1 \\
   t &:= 0 \\
   \text{while } i \leq n \\
   t &:= t + i \\
   i &:= 2i
   \end{align*}
   ```

   Count the number of operations (as a function of $n$) of this program, where an operation is an addition or a multiplication (ignore the comparisons used to test the conditions in the **while** loop).

   (cf. Rosen 3.3 Exercise 4)