

# Discrete Mathematics

Moshe Rosenfeld

Hanoi 2011

moishe@u.washington.edu

## 1 Sequences

Numbers and patterns...

Find the next two terms and the general term of the following sequences:

1. 3, 4, 8, 122, 722, 5042, 40322, ...
2. 3, 17, 55, 129, 251, 433, 687, ...
3. 1, 10, 11, 100, 101, 110, 111, 1000, ...

Prime related sequences:

1. 0, 1, 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 1, ...
2. 1, 2, 2, 3, 2, 4, 2, 4, 3, 4, 2, 6, 2, 4, ...
3. 1, 2, 6, 30, 210, 2310, ...