

COMP2201 – Discrete Mathematics

Generating Functions

1. Find the generating function for the sequence

$$\{0, 1, 2, 3, 4, 5, \dots\}$$

2. Find the generating function for the sequence

$$\{2, 6, 12, 20, \dots\}$$

3. Find the generating function for the sequence

$$\{1, 8, 21, 40, 65, \dots\}$$