MATH 2320 – Discrete Mathematics   Assignment #9
Fall 2011

Instructions

- Answer each question completely; justify your answers.
- This assignment is due at 17:00 on Thursday November 24th in Assignment Box #23.

1. Exercise 5.1.4, part (d).

2. Let $n \in \mathbb{N}$. Prove that $\displaystyle\sum_{i=1}^{n} i = \frac{n^2 + n}{2}$.

3. Exercise 5.1.37, part (a).

4. Exercise 5.2.20.

5. Exercise 5.2.23.

6. Consider the geometric sequence that begins as follows: 4, 2, 1.

   (a) What is the nth term in this sequence?

   (b) What is the sum of the first n terms of the sequence?

   (c) What is the sum of the first 20 terms of the sequence?

7. Exercise 5.2.33, parts (c) and (e).

8. Exercise 5.2.37.

9. Exercise 5.3.2.

10. Exercise 5.3.6.

11. Exercise 5.3.11, part (a).

12. Exercise 6.1.3.

13. Exercise 6.1.8.