PMAT 2320 – Discrete Mathematics   Assignment #4
Winter 2008

Instructions

- Answer each question completely; justify your answers.
- This assignment is due at 4:00 pm on 13 February 2008.

1. Exercise 2.3.11 (except part (a)).

2. Define $\sim$ on $\mathbb{Z}$ by $x \sim y$ if $4 \,|\, (3x + y)$.

   (a) Show that $\sim$ is an equivalence relation on $\mathbb{Z}$.
   (b) What is $\bar{0}$?
   (c) What is $\bar{1}$?
   (d) What is $\bar{2}$?
   (e) What is $\mathbb{Z}/\!\sim$?

3. Exercise 2.4.6.

4. Exercise 2.4.10.

5. Exercise 2.4.18.

6. Exercise 2.4.20.