Math 220 - Discrete Mathematics - Fall 2016

Homework 10c

Due Monday, November 21

1. Book Problems

Section 11.2 # 1, 3, 4, 6, 9, 10
Section 11.3 # 2, 3, 4, 5

2. Additional Problems

(2) Let $\mathbb{Z}^* = \mathbb{Z} - \{0\} = \{..., -3, -2, -1, 1, 2, 3, ...\}$. Define a relation on $\mathbb{Z} \times \mathbb{Z}^*$ by $(a, b)R(c, d)$ if $ad = bc$.
   (a) Prove this is an equivalence relation.
   (b) Describe the equivalence classes.
   (c) What familiar set is given by the set of equivalence classes of this relation?