Quiz 6: Sets and probability

MAT 123, Summer 2016

Name:

1. (10 points) Define the sets $A = \{2, 4, 6, 8, 10, 12\}$, $B = \{4, 8, 12\}$, and $C = \{1, 3\}$. In this problem all of these sets are considered subsets of the universal set

   $\mathcal{U} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$. Find the following sets.

   (a) $B \cup C$

   (b) $A \cap C$

   (c) A'

2. (10 points) Suppose that you draw one ball from an urn containing 10 white balls, 6 red balls, and 2 green balls.

   (a) What is the probability that you draw a red ball?

   (b) What is the probability that you draw a white ball?