MATH 1113 – Mathematics for General Education
Quiz 6 – Ch 2.4

Instructions: Print out this page and turn it in at the beginning of class. Circle your final answers. Show all work. Answers with no work shown or illegible work will receive no credit.

1. Given that

$$|A| = 200$$
$$|B| = 300$$
$$|A \cap B| = 100$$

determine $|A \cup B|$.

2. Given that

$$|C| = 150$$
$$|D| = 100$$
$$|C \cup D| = 200$$

determine $|C \cap D|$.

3. The American Association of Blood Banks reports that:
   44% of the U.S. population has the A antigen.
   15% of the U.S. population has the B antigen.
   4% of the U.S. population has both the A antigen and the B antigen.
What percentage of the U.S. population has neither the A antigen nor the B antigen? (You may need to draw a Venn diagram as well as using the principle of inclusion-exclusion.)