## Math 215 - Homework 3

## Due Friday, September 28

**1.** Give a definition (in set builder notation) of the set of natural numbers that can be written as the sum of three squares of natural numbers.

- **2.** Show  $(A B) \cap (A C) = A (B \cup C)$ .
- **3.** Show  $A B = \emptyset$  if and only if  $A \subseteq B$ .
- 4. List the elements of the set  $\mathcal{P}(\{1, \{1, 2\}\})$ .