



INTRO TO ABSTRACT MATHEMATICS  
SPRING 2020

ASSIGNMENT 6.2  
DUE MARCH 4

**Exercise 1.** Textbook exercise 3.3.6.

**Exercise 2.** Let  $a, x \in \mathbb{R}$  and suppose that  $a > 0$ . Prove that the equation  $y + a^2/y = x$  has a real solution if and only if  $2a \leq |x|$ .

**Exercise 3.** Prove that if  $A$  and  $B \setminus C$  are disjoint, then  $A \cap B \subset C$ .