

Due Wednesday, February 27

*From the textbook, chapter 2:*

2.36

2.37 (prove those statements which are true for all  $x$ , find counterexamples to those which are not)

2.47 (prove those statements which are true, disprove those which are not)

*Also do the following problem:*

(\*) Consider the following statement:

For all positive real numbers  $x$  and  $y$ , if  $xy \geq 30$  then  $x \geq 5$  or  $y > 6$ .

Prove this in two ways: (a) by proving the contrapositive, and (b) with a direct proof by cases.