# Challenge Problem 1

(due February 6)

(Quadratic equation and wording challenge)

Math 130 *Kovitz* Spring 2018

There are two real numbers. Taking half of one of them is the same as adding 12.5 to the other. And furthermore the squares of the two real numbers are 200 apart.

What could those two real numbers be? Give all possible pairs of numbers that work.

The answer is fine as an exact fraction: decimals or mixed numbers are not needed.

Check each pair of answers using a calculator.

*Hint:* there are surely more than two pairs of numbers that solve this problem.

Give each answer as a pair of real numbers, such as: the first number is 11 and the other number is 4 (this is not a correct answer; just an example to illustrate how to present a solution).