

Name:  
September 22, 2015  
MAC 1105.1A26  
Cyr

Quiz 4

You must show all work to receive full credit!!

**Problem 1.** (2 pts) Solve the equation  $x^2 - 4x - 2 = 0$  by any appropriate method.

**Problem 2.** (1 pt) There is a right triangle with one leg 7 inches shorter than the other leg, and the hypotenuse is 1 inch longer than the longer leg. Write down **but do not solve** the equation that must be solved in order to determine the lengths of the sides. (Hint: draw a picture.)

**Problem 3.** (2 pts) A boat travels upriver to a landing and then returns to its starting point. The trip upriver takes 12 hours and the trip back takes 9 hours. If the average speed on the return trip is 5 mph faster than on the trip upriver, what is the boat's speed upriver? (Hint: make a table of the speed, time, and distance of the boat during the two different trips.)