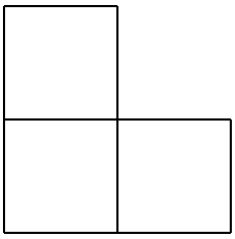
Name _____

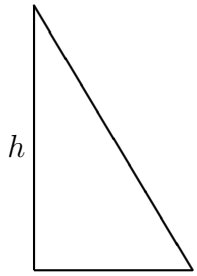
Homework 6
Section 1.4

1. (4) A rectangular enclosure has an area of 500 square meters. Determine the perimeter of the enclosure as a function of the length, l.

2. (5) Dennis the mad scientist needs to construct some pens for his new emu farm. He has decided to build three adjacent square pens in the configuration shown below. Write a function, $A(l)$, which gives the total area of the pens in terms of the **total amount of fencing used**, l.



3. (6) Dennis now decides that he wants to construct an additional emu pen. For reasons known only to him, he has decided to construct the pen in the shape of a right triangle. He has also chosen to use two different types of fencing– one which costs \$4 per yard along the hypotenuse of the triangle, and fencing which costs \$3 per yard along the other two sides. If the pen will have an enclosed area of 150 square yards, determine a function which gives the total cost of constructing the pen as a function of the length of the labeled side, h.



4. (5) A student has taken 5 quizzes with an average score of q. The student then takes a sixth quiz and receives a score of x. Write an expression for the average score, A, for all 6 quizzes.