Name:_____ Date:_____ Period:_____

PS _____ Comm _____ (F/A 7-1)

MAXIN' the AREA

Fred the farmer is building a rectangular pen for his cows. He has **144 ft** of fencing materials. Fred is concerned that his cows are getting fat so he would like to get the **maximum area** possible for them to exercise in **using all the fencing** material he has.

a) Find the dimensions of the pen with the largest area. Show all your work and explain your reasoning.

b) Suppose farmer Fred decided to use the side of his barn as one side of the pen. Find the dimensions of the 3 remaining sides to get the maximum area.