Geometry in 3-D: An Acre, A Hectare, and How They Compare

An **acre** consists of **43,560 square feet** while a **hectare** is equivalent to 10^4 **square meters**, or one square hectometer (hecto- is another metric prefix that denotes one-hundred, *i.e.*, $1\,\text{hm} = 100\,\text{m}$)...

a.   An acre is what percentage of a hectare?   (MUST show your work in order to receive full credit.)

b.   A hectare is what percentage of an acre?   (MUST show your work in order to receive full credit.)

c.   Draw a square (in the space below) where each side measures 5 inches.

d.   If the square (in part "c") represents one hectare, then what is the scale of your drawing?

_____ meters = 1 inch

e.   Determine the size (dimensions) of a rectangle, or a square, that represents one acre using the same scale (in part "d"). Then draw the appropriate figure inside the ($5'' \times 5''$, part "c") square which represents one acre. (MUST show your work in order to receive full credit.)