Background

Converting units from one measurement system to another is a common practice in engineering and science.

Problem Statement

You are to write a program that prompts the user for an area in acres and converts it to several other area units. The conversions are listed below:

[ha] = [acre] / 2.47105	[ft^2] = [acre] x 43560	[m^2] = [acre] x 4046.86
[mi^2] = [acre] / 640	[yd^2] = [acre] x 4840	[in^2]=[acre] x 6.273 x 10^6

Instructions

Represent
- Consider creating a flowchart, algorithm, or pseudocode for solving the problem.

Plan
- Create a file named **APP_C24_1.cpp**
- Add comment statements to help organize your program.

Implement
- In the file **APP_C24_1.cpp**, perform the following tasks:
  - Prompt the user for an area in acres.
  - Read the user's response.
  - Compute the equivalent area in: hectares [ha], square feet [ft^2], square meters [m^2], square miles [mi^2], square yards [yd^2], and square inches [in^2]
  - Display to the screen the area in acres as the input and the six corresponding values as the output. Include proper units on all. The output should be well formatted.
  - Write the same information to the file **APP_C24_1_result.txt** . Write the input area to this file, as well.
- Compile, link, and run your program using the test condition below.

Evaluate
- Perform a hand calculation for **APP_C24_1.cpp** to verify and check your results.

Document
- Create a single PDF that includes your code, the output file, and your hand calculation verification.
- Submit the PDF to Carmen according to the DAL.

Test Conditions
- Input area: 5.5 acres

Include the standard comment, **`printf()`,** and **`fprintf()`** statements indicating name, seat number, etc.