

CprE 185 Lab Exam: Practice Problems

Exam Date: 12/9/2005

Problem 1:

Given a distance measurement in centimeters, convert the reading to English units. Your program must be able to accurately determine the number of feet and inches in the measurement. For example you must display the output as 1 foot and 1 inch, not 13 inches. The program should also use a function to perform the conversion and display the results. For simplification purposes, your program should take all inputs as floating point numbers (2.54 cm = 1 inch, 12 inches = 1 foot).

Sample Output:

```
Please Enter the Distance in centimeters:  
635
```

```
Converted Distance: 20 feet 10.0 inches
```

Problem 2:

Given a present value of a used car, design a program that will calculate the total time for a car to depreciate to 500 dollars or less. Assume that after each year, a car is worth 70% of its starting value. For example if a car is worth \$1000 in 1996, it will be worth \$700 in 1997 and \$490 in 1998. For simplification purposes, remember to take all inputs as floating point numbers. Your program must use a function, to perform the depreciation calculations and display the results.

Sample Output:

```
Please Enter The New Car Value:  
1000.0
```

```
The car will depreciate to 490.00 dollars in 2 years.
```