

Area Conversions in DLL file

1 Introduction

The conversion DLL file of unit Area is written in C/C++ programming language style, and do not require any extra code in using this DLL file. This DLL file includes 2 functions to handle the Area conversions as follow:

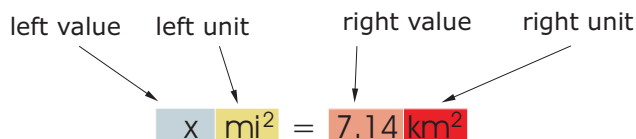
```
double LP_UnitConversionsArea_GetLeftValue (char* LeftUnit, char* RightUnit, double RightValue) ;
double LP_UnitConversionsArea_GetRightValue(char* LeftUnit, char* RightUnit, double LeftValue ) ;
```

2 Problems in Area conversion

The two functions in DLL file are used to handle all Area conversions in two problems.

Problem 1 The unknown value is on the **left hand side** of equation

This problem in conversions is described in the figure:



The value x is obtained by either one of two methods:

- Method A : The code is :

```
double x = LP_UnitConversionsArea_GetLeftValue("SquareMile", "SquareKilometer", 7.14) ;
```

- Method B : The code is :

```
char LeftUnit[] = "SquareMile" ;
```

```
char RightUnit[] = "SquareKilometer" ;
```

```
double RightValue = 7.14 ;
```

```
double x = LP_UnitConversionsArea_GetLeftValue(LeftUnit, RightUnit, RightValue) ;
```


3 Unit names in Area conversions

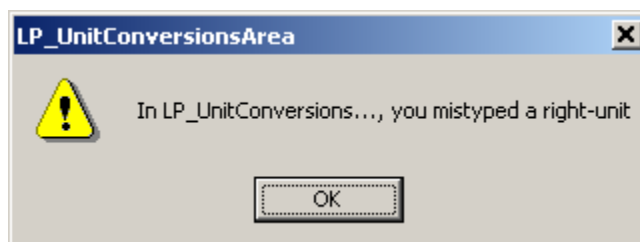
You can choose the unit name (case sensitive) in the following table for parameters, LeftUnit and/or RightUnit

SquareMillimeter	Acre
SquareCentimeter	Are
SquareMeter	Barn
SquareKilometer	SquareChain
SquareInch	Hectare
SquareFoot	SquareMicrometer
SquareYard	CircularMil
SquareMile	SquareRod

When your unit name is not in this table, the returns of functions are -1 and the error message will issue as shown in the following figures:



or



4 Tip

1. The parameters in two functions have the same order of unit name (LeftUnit is first and RightUnit is second) and the last parameter is the known value.
2. Use function LP_UnitConversionsArea_GetLeftValue(..) if your **unknown** value is on the **left hand side** of the equation.
3. Use function LP_UnitConversionsArea_GetRightValue(..) if your **unknown** value is on the **right hand side** of the equation.