

There is a standard C library *math.h* which contains the trigonometric functions *float cos(float x)*, *float sin(float x)*, and *float tan(float x)*. Unfortunately *x* must be in radians.

Write a small library file *mytrig.c* and header *mytrig.h* for *d_cos(float angle)*, *d_sin(float angle)*, and *d_tan(float angle)* where *angle* is in degrees. Also use a defined constant *float _PI_ (= 3.141592)*.

MyTrig.c

```
// converts math.h functions to work  
// with angles given in degrees  
// Mike Coombes 2005/01/05
```

```
float d_cos(float angle_in_degrees) ;  
float d_sin(float angle_in_degrees);  
float d_tan(float angle_in_degrees);
```

MyTrig.h

```
#include "mytrig.h"  
#include <math.h>  
#define _PI_ 3.14159  
// converts angle_in_degrees to  
// radians for trig.h functions to work  
// Mike Coombes 2005/01/05
```

```
float d_cos(float angle_in_degrees)  
{  
    angle_in_degrees *= _PI_/180;  
    return cos(angle_in_degrees);  
}
```

```
float d_sin(float angle_in_degrees)  
{  
    angle_in_degrees *= _PI_/180;  
    return sin(angle_in_degrees);  
}
```

```
float d_tan(float angle_in_degrees)  
{  
    angle_in_degrees *= _PI_/180;  
    return tan(angle_in_degrees);  
}
```