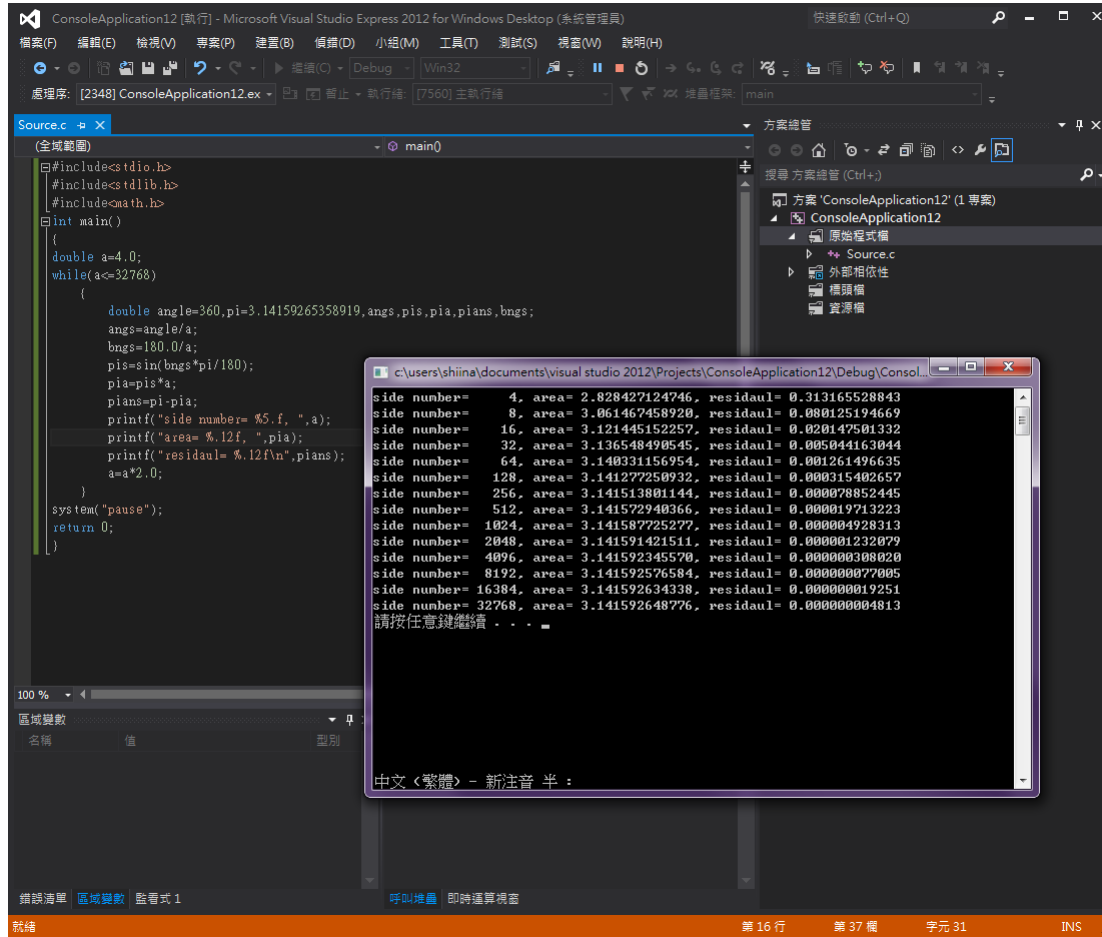


## 4A4G0053 梁鈞凱

### 1)程式碼

```
#include<stdio.h>
#include<stdlib.h>
#include<math.h>
int main()
{
double a=4.0;
while(a<=32768)
    {
        double angle=360,pi=3.14159265358919,angs,pis,pia,pians,bngs;
        angs=angle/a;
        bngs=180.0/a;
        pis=sin(bngs*pi/180);
        pia=pis*a;
        pians=pi-pia;
        printf("side number= %5.f, ",a);
        printf("area= %.12f, ",pia);
        printf("residual= %.12f\n",pians);
        a=a*2.0;
    }
system("pause");
return 0;
}
```

## 2)執行結果:



The screenshot shows the Microsoft Visual Studio Express 2012 interface. The Source.c window displays the following code:

```
#include <stdio.h>
#include <stdlib.h>
#include <math.h>

int main()
{
    double a=4.0;
    while(a<=32768)
    {
        double angle=360,pi=3.14159265358919,angs,piis,pia,pians,bngs;
        angle=angle/a;
        bngs=180.0/a;
        piis=sin(bngs*pi/180);
        pia=piis*a;
        pians=pi-pia;
        printf("side number= %5.f, ",a);
        printf("area= %.12f, ",pia);
        printf("residual= %.12f\n",pians);
        a=a*2.0;
    }
    system("pause");
    return 0;
}
```

The Console window shows the output of the program:

```
side number= 4, area= 2.828427124746, residual= 0.313165528843
side number= 8, area= 3.061467458920, residual= 0.080125194669
side number= 16, area= 3.121445152257, residual= 0.020147501332
side number= 32, area= 3.136548490545, residual= 0.005044163044
side number= 64, area= 3.140331156954, residual= 0.001261496635
side number= 128, area= 3.141277250932, residual= 0.000315402657
side number= 256, area= 3.141513801144, residual= 0.000078852445
side number= 512, area= 3.141572940366, residual= 0.000019713223
side number= 1024, area= 3.141587725277, residual= 0.000004928313
side number= 2048, area= 3.141591421511, residual= 0.000001232079
side number= 4096, area= 3.141592345570, residual= 0.000000308020
side number= 8192, area= 3.141592576584, residual= 0.000000077005
side number= 16384, area= 3.141592634338, residual= 0.000000019251
side number= 32768, area= 3.141592648776, residual= 0.000000004813
請按任意鍵繼續 . . .
```

The status bar at the bottom of the window shows the current line and column: 第 16 行 第 37 欄 字元 31 INS.