```c
#include <stdio.h>
#include<math.h>
void cylinder()
{
    float r,h,a,v;
    printf("enter the radius and height");
    scanf("%f%f",&r,&h);
    a=(2*3.14*r*h)+(2*3.14*r*r);
    v=2*3.14*r*r;
    printf("area=%f",a);
    printf("\nvolume=%f",v);
}

void cone()
{
    float r,h,a,v;
    printf("enter the radius and height");
    scanf("%f%f",&r,&h);
    a=3.14*r*(r+sqrt((h*h)+(r*r)));
    v=(3.14*r*r*h)/3;
    printf("area=%f",a);
    printf("\nvolume=%f",v);
}

void sphere()
{
    float r,a,v;
```

input

```
enter options:
 1.cyclinder
 2.cone
 3.sphere 3
enter the radius 3
area=113.040001
volume=113.040001
 enter 1 to continue
```

```c
32
33  void sphere()
34  {
35      float r,a,v;
36      printf("enter the radius");
37      scanf("%f",&r);
38      a=4*3.14*r*r;
39      v=(4*3.14*r*r*r)/3;
40      printf("area=%f",a);
41      printf("\nvolume=%f",v);
42  }
43  int main()
44  {
45      int n,a;
46      a=1;
47
48      while(a==1)
49      {
50          printf("enter options:\n 1.cyclinder \n 2.cone \n 3.sphere ");
51          scanf("%d",&n);
52
53          switch(n)
54          {
55              case 1: cylinder();
56              break;
57              case 2: cone();
58              break;
59              case 3: sphere();
```

input

```
enter options:
 1.cyclinder
 2.cone
 3.sphere   2
enter the radius and height2 4
area=40.645012
volume=16.746666
 enter 1 to continue
```