P-6

```
#include<stdio.h>
#include<math.h>
#define pi 3.14
int main()
{
    int c,i;
float r,h;
float area=0.0;
float volume=0.0;
  while (i!=4)
{
   printf("Height\n");
     scanf("%f",&h);
printf("enter the radius\n");
    scanf("%f",&r);
printf("select the shape\n");
printf("1-cylinder 2-cone 3-sphere
                    4-exit\n");
printf("enter the choice\n");
    scanf("%d",&c);
```

```
switch(c)
{
  case 1:
  area = (2*r*h*pi) + (2*pi*pow(r,2));
     Volume = pi*pow(r,2)*h;
  printf ("the area of cylinder is %f\n",
                                  area);
  printf ("vol of cylinder is %f\n", volume);
        break;
  case 2:
  area = (r*r*pi) + (r*pi*sqrt(pow(h,2)+
                                  pow(r,2)));
  Volume = (pi*pow(r,2)*h)/3;
  printf ("the area of cone is %f\n",area);
  printf ("the volume of cone %f\n",volume);
        break;
  case 3:
  area = 4*pi*pow(r,2);
  Volume = pi*pow(r,2)*(4/3);
  printf ("the area of sphere is %f", area);
  printf ("the vol of sphere is %f", volume);
        break;
  case 4:
  printf ("thank you");
        break;
```

```
default:
printf("invalid option\n");
    }
  }
}
```