

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

```
void cylinder()
```

```
{
```

```
    float r, h, sa, v;
```

```
    printf("Enter radius: ");
```

```
    scanf("%f", &r);
```

```
    printf("Enter height: ");
```

```
    scanf("%f", &h);
```

```
    sa = (2 * 3.142 * r * h) + (2 * 3.142 * r * r);
```

```
    v = 3.142 * r * r * h;
```

```
    printf("Surface area is %f\n", sa);
```

```
    printf("Volume is %f\n", v);
```

```
}
```

```
void cone()
```

```
{
```

```
    float r, h, sa, v, t;
```

```
    printf("Enter radius: ");
```

```
    scanf("%f", &r);
```

```
    printf("Enter height: ");
```

```
    scanf("%f", &h);
```

```
    t = sqrt((h * h) + (r * r));
```

```
    sa = 3.142 * r * (r + t);
```

```
    v = 3.142 * r * r * h / 3;
```

```
    printf("Surface area is %f\n", sa);
```

```
    printf("Volume is %f\n", v);
```

```
}
```



```
void sphere
{
```

```
    float r, sa, v;
    printf("Enter radius: ");
    scanf("%f", &r);
    sa = 4 * 3.142 * r * r;
    v = 4 * 3.142 * r * r * r / 3;
    printf("surface area is %f \n", sa);
    printf("volume is %f \n", v);
}
```

```
}
int main()
{
```

```
    int n;
    char a, t;
    printf("\n\n 1-Cylinder\n2-Cone\n3-Sphere\n");
    do
```

```
    {
        printf("Choose one: ");
        scanf("%d", &n);
        switch (n)
```

```
        {
            case 1:
                cylinder();
                break;
```

```
            case 2:
                cone();
                break;
```

```
            case 3:
```



```
sphere(1);  
break;  
default:  
    printf("Enter valid choice!!");  
    break;  
}  
printf("\n Press 1 to continue or 0 to exit: ");  
scanf("%d", &t);  
if (t==1)  
{  
    a=1;  
}  
else if (t==0)  
{  
    a=0;  
}  
else  
{  
    return -1;  
}  
} while (a==1);  
return 0;  
}
```