EECE.2160: ECE Application Programming

Programming Assignment #2: Basic I/O and Operations

Test Cases

The results of four full program runs are shown below, with user inputs underlined. Remember, when running the program in submit mode in zyBooks, user inputs are not shown.

TEST CASE 1

```
Enter sphere radius (cm): 9
Enter base radius and height of cone (cm): 21.60 20.21
Enter length, width, and height of triangular prism (cm): 0.5 0.75
0.875

Sphere information:
Radius = 9.00 cm
Surface area = 1017.8760 square cm
Volume = 3053.6281 cubic cm

Cone information:
Base radius = 21.60 cm
Height = 20.21 cm
Surface area = 3473.0248 square cm
Volume = 9874.2117 cubic cm

Prism information:
Length = 0.50 cm
Width = 0.75 cm
Height = 0.88 cm
Surface area = 2.1775 square cm
Volume = 0.1641 cubic cm
```

TEST CASE 2

```
Enter sphere radius (cm): 9.49
Enter base radius and height of cone (cm): 1.2 3.4
Enter length, width, and height of triangular prism (cm): 5.6 7.8 9.1

Sphere information:
Radius = 9.49 cm
Surface area = 1131.7286 square cm
Volume = 3580.0348 cubic cm

Cone information:
Base radius = 1.20 cm
Height = 3.40 cm
Surface area = 18.1165 square cm
Volume = 5.1271 cubic cm

Prism information:
Length = 5.60 cm
Width = 7.80 cm
Height = 9.10 cm
Surface area = 243.1681 square cm
Volume = 198.7440 cubic cm
```

TEST CASE 3

```
Enter sphere radius (cm): 950
Enter base radius and height of cone (cm): 916 2021
Enter length, width, and height of triangular prism (cm): 55 15 5

Sphere information:
Radius = 950.00 cm
Surface area = 11341149.4795 square cm
Volume = 3591364001.8287 cubic cm

Cone information:
Base radius = 916.00 cm
Height = 2021.00 cm
Surface area = 9021285.0845 square cm
Volume = 1775766582.1925 cubic cm

Prism information:
Length = 55.00 cm
Width = 15.00 cm
Height = 5.00 cm
Surface area = 1938.5255 square cm
Volume = 2062.5000 cubic cm
```

TEST CASE 4

```
Enter sphere radius (cm): .9
Enter base radius and height of cone (cm): .8 .7
Enter length, width, and height of triangular prism (cm): .6 .5 .4

Sphere information:
Radius = 0.90 cm
Surface area = 10.1788 square cm
Volume = 3.0536 cubic cm

Cone information:
Base radius = 0.80 cm
Height = 0.70 cm
Surface area = 4.6823 square cm
Volume = 0.4691 cubic cm

Prism information:
Length = 0.60 cm
Width = 0.50 cm
Height = 0.40 cm
Surface area = 1.0400 square cm
Volume = 0.0600 cubic cm
```