***Javascript Assignment 5***

1. *Write a JavaScript program to get the volume of a Cylinder, Sphere and Cone with four decimal places using objects and classes. Create classes for volumes for each geometric shape which returns the output using the getVolume() method.*

*eg- to get volume of cylinder-*

*let obj= new Cylinder(radius,height);*

*obj.getVolume();*

*Formulas for volumes of the shapes-*

*1) Cylinder- Volume = πr*

*2h*

*where r is the radius and h is the height of the cylinder.*

*2)Sphere- Volume= 4/3πr*

*3*

*where r is the radius*

*3) Cone- Volume= πr*

*2h/3*

*where r is the radius and h is the height of the cone.*

***ANSWER:***

***class Cylinder {***

***constructor(radius, height) {***

***this.radius = radius;***

***this.height = height;***

***}***

***getVolume() {***

***const volume = Math.PI \* this.radius \* this.radius \* this.height;***

***return volume.toFixed(4);***

***}***

***}***

***class Sphere {***

***constructor(radius) {***

***this.radius = radius;***

***}***

***getVolume() {***

***const volume = (4/3) \* Math.PI \* Math.pow(this.radius, 3);***

***return volume.toFixed(4);***

***}***

***}***

***class Cone {***

***constructor(radius, height) {***

***this.radius = radius;***

***this.height = height;***

***}***

***getVolume() {***

***const volume = (1/3) \* Math.PI \* Math.pow(this.radius, 2) \* this.height;***

***return volume.toFixed(4);***

***}***

***}***

***const cylinder = new Cylinder(3, 5);***

***console.log(cylinder.getVolume()); // Output: 141.3717***

***const sphere = new Sphere(4);***

***console.log(sphere.getVolume()); // Output: 268.0826***

***const cone = new Cone(2, 6);***

***console.log(cone.getVolume()); // Output: 25.1327***