Christopher Bussen

CPS 150 – Algorithms and Programming 1

Lab 3

9/1/20

**Program 1 – jshell Screenshot**

**A screenshot of a cell phone

Description automatically generated**

**Program 1 – jshell Java Code**

double Cube(double x){

return(x\*x\*x\*);

}

double Volume(double radius){

return(4\*Math.PI\*Cube(radius)/3);

}

Volume(1.0);

Volume(6.82);

Volume(4.4431);

**Program 2 – Algorithm**

1. START
2. Import scanner
3. Declare a double variable, length, to be assigned a user input
4. Prompt the user to input a value for length
5. Declare a double variable, width, to be assigned a user input
6. Prompt the user to input a value for width
7. Declare a double variable, area, which will be used as an output
8. Store the product of the length and width (which is equal to the area of the rectangle) in it
9. Declare a double variable, perimeter, which will also be used as an output
10. Store the sum of double the length and double the width (which is equal to the perimeter of the rectangle) in it
11. Print the value of variable area
12. Print the value of variable perimeter
13. END

**Program 3 – Program ScreenshotA screenshot of a cell phone

Description automatically generated**

**Program 3 – Code**

/\*

Christopher Bussen

Lab 3

CPS 150 - The Java Class

\*/

//Step 2: Import scanner

import java.util.Scanner;

public class AreaPerimeter{

public static void main(String [] args){

Scanner input = new Scanner(System.in);

//Steps 3/4: declare variable length and prompt user input

System.out.print("Enter the rectangle's length: ");

double length = input.nextDouble();

//Steps 5/6: declare variable width and prompt user input

System.out.print("Enter the rectangle's width: ");

double width = input.nextDouble();

//Steps 7/8: declare variable area to be used as output - store length\*width in area

double area = length \* width;

//Steps 9/10: declare variable perimeter to be used as output - store 2\*length + 2\*width in perimeter

double perimeter = (2 \* length) + (2 \* width);

//Steps 11/12: print area and perimeter values

System.out.println("Area = " + area + ", Perimeter = " + perimeter);

}

}