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BHU/18/04/05/0012

CMP 202 Assignment one

1. **Area of a square**

public class sphere

{

public static void main(String args[])

{

int s=13;

int area\_square=a\*a;

System.out.println("Area of the square="+area\_square);

}

}

1. **Area of a rectangle**

public class rectangle

{

public static void main(String args[])

{

int width=5;

int height=10;

int area=width\*height;

System.out.println("Area of rectangle="+area);

}

1. **Area of of a triangle**

double h= s. nextDouble();

double area=AOT(b,h); System. out. println("Area of Triangle is: " + area);

} static double AOT(double b,double h)

{

return ((b\*h)/2);

}

1. **Area of a trapezoid**

import java.util.\*;

public class Prog {

public static void main(String[] args) {

Scanner obj=new Scanner(System.in);

double area;

System.out.println(" Base of Trapezoid = ");

double a = obj.nextDouble();

System.out.println("Second Base of Trapezoid = ");

double b = obj.nextDouble();

System.out.println("Height of Trapezoid = ");

double hgt = obj.nextDouble();

area = 0.5 \* (a+b) \* hgt;

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

}

1. **Area of a Circle**

import java.util.Scanner;

public class Area

{

public static void main(String[] args)

{

int r;

double pi = 3.14, area;

Scanner s = new Scanner(System.in);

System.out.print("Enter radius of circle:");

r = s.nextInt();

area = pi \* r \* r;

System.out.println("Area of circle:"+area);

}

}

1. **Circumference of a Circle**

import java.util.Scanner;

public class CircumfrenceOfCircle {

public static void main(String args[]){

int radius;

double circumference;

Scanner sc = new Scanner(System.in);

System.out.println("Enter the radius of the circle ::");

radius = sc.nextInt();

circumference = Math.PI\*2\*radius;

System.out.println("Circumference of the circle is ::"+circumference);

}

}

1. **Surface area of a cube**

public class VolumeOfCube {

public static void main(String[] args) {

double side, volume, surfaceArea;

Scanner scanner;

scanner = new Scanner(System.in);

// Take input from user

System.out.println("Enter Length of Side of Cube");

side = scanner.nextDouble();

/\* Total surface area of Cube = 6 X side X side \*/

surfaceArea = 6 \* side \* side;

/\* Volume of Cube = side X side X side \*/

volume = side \* side \* side;

System.out.format("Surface Area of Cube = %.3f\n", surfaceArea);

System.out.format("Volume of Cube = %.3f\n", volume);

}

}

1. Curved area of a cylinder

public class test

{

public static void main(String args[])

{

float r, h, surfacearea;

r = 2;

h = 5;

surfacearea = (22\*r\*(r+h))/7;

System.out.println("Surface Area of Cylinder is: "+surfacearea);

}

}

1. **Total surface area of a cylinder**

import java.util.Scanner;

public class prog {

public static void main(String[] args) {

Scanner obj = new Scanner(System.in);

System.out.println("Radius : ");

double r = obj.nextDouble();

System.out.println("Height : ");

double hgt = obj.nextDouble();

double surface\_area = 2 \* Math.PI \* r \* (r + hgt);

double vol = Math.PI \* r \* r \* hgt;

System.out.println("Surface area = " + surface\_area);

System.out.println("Volume = "+ vol);

}

1. **Volume of a cylinder**

public class cylinder{

public static void main(String args[])

{

int height=38;

int radius=35;

double pie=3.14285714286;

double volume=pie\*(radius\*radius)\*height;

System.out.println("Volume of the cylinder="+volume);

}

1. Accleration formula

util.\*;

lang.\*;

class AccelerationGravity.

public static void main(String args[])

double g=2,r=21,re=2,s;

s=(Math. pow(re,2)/Math. pow(r,2))\*g ;

println("Acceleration due to gravity= "+s);

}

1. Formula for Density

}

// calculate weight based upon volume.

//Calculate M Given p and V -- Calculate mass(weight) given density(pounds per cubic inch)and volume. -- M = pV

private void calculateWeight(double number) {

System.out.println ("weight of MatchBox is " + (width \* height \* depth) \* number);

}

1. Formula for pressure

import java.io.\*;

import java.util.Scanner;

import java.lang.\*;

class Pressure

{

public static void main(String[] args)

{

Scanner in = new Scanner(System.in);

double k,p=1,d=4,w=7,q=6;

k = (1.59923\*p\*Math.pow(d,4)\*q)/Math.pow(w,2);

System.out.println("pressure = "+k+"");

}

}

1. Formula for Kinetic energy

import java.util.Scanner;

/\*\*

\*

\* @author Tutor

\*/

public class kineticEnergy {

public static double mass1, velocity1, kineticEnergy, m1, v1, kE1;

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println(" Enter the mass .");

m1 = input.nextDouble();

System.out.println(" Enter the velocity.");

v1 = input.nextDouble();

kE1 = kineticEnergy(m1, v1);

System.out.println(" m1 is " + m1 + " v1 is " + v1 + " kE1 is " + kE1); // Tester for m1,v1 and ke1

}

1. Formula for Voltage

public class Circuit {

/\*Creates only one instance of a circuit.\*/

private static Circuit instance = null;

protected static Circuit getInstance() {

if (instance == null) {

instance = new Circuit();

}

return instance;

}

/\*\*Instance variable list to contain components.\*/

private ArrayList<Component> components;

/\*\*Private constructor ensures only one instance of circuit can be created.\*/

private Circuit() {

this.components = new ArrayList<>();

}