CT/2021/001 (Nirmal B.A.C.C)

Q\_01

package Q\_01;  
import java.lang.Math;  
public class one {  
 public static void main(String[] args) {  
 double A=10.0,B=2.0,C=5.0;  
 double X=10.0,Y=3.0,r=2.0;  
  
  
 double expression\_a=Math.*sqrt*(Math.*pow*(B,2)+4\*A\*C);  
 double expression\_b=Math.*sqrt*(X+4\*Math.*pow*(Y,3));  
 double expression\_c=Math.*cbrt*(X\*Y);  
 double expression\_d=Math.*PI*\*Math.*pow*(r,2);  
  
 System.*out*.printf("%.2f%n",expression\_a);  
 System.*out*.printf("%.2f%n",expression\_b);  
 System.*out*.printf("%.2f%n",expression\_c);  
 System.*out*.printf("%.2f%n",expression\_d);  
  
 }  
}

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Q\_02

package Q\_02;  
  
import java.util.Scanner;  
  
public class two {  
 public static void main(String[] args) {  
  
 System.*out*.println("Enter CM value :");  
 Scanner scanner=new Scanner(System.*in*);  
 int cm=scanner.nextInt();  
 Double in=cm/2.54;  
  
 System.*out*.printf("Inches : "+"%.2f%n",in);  
  
 scanner.close();  
  
 }  
  
  
}

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Q\_03

package Q\_03;  
  
import java.util.Scanner;  
  
public class three {  
 public static void main(String[] args) {  
  
 Scanner scanner=new Scanner(System.*in*);  
 System.*out*.println("Enter temperature in Celsius : ");  
 double Celsius=scanner.nextDouble();  
 double Fahrenheit=(1.8\*Celsius)+32;  
 System.*out*.println("Temperature in Fahrenheit : "+Fahrenheit);  
  
  
 scanner.close();  
}  
  
}

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Q\_04

package Q\_04;  
  
import java.util.Scanner;  
  
public class four {  
 public static void main(String[] args) {  
  
 System.*out*.print("Enter Weight in Kg : ");  
 Scanner scanner=new Scanner(System.*in*);  
  
 double body\_W= scanner.nextDouble();  
  
  
 double calories=body\_W\*19;  
 System.*out*.print(" Number of calories the person needs in one day : "+calories);  
 scanner.close();  
  
 }  
  
  
}

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Q\_05

package Q\_05;  
  
import java.util.Scanner;  
  
public class five {  
 public static void main(String[] args) {  
  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.print("Enter temperature in Fahrenheit : ");  
 double fahrenheit = scanner.nextDouble();  
 double celsius = (5.0 / 9.0) \* (fahrenheit - 32);  
 System.*out*.printf("Temperature in Celsius : " + "%.2f%n",celsius);  
 scanner.close();  
  
  
  
 }  
}

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Q\_06

package Q\_06;  
  
import java.util.Calendar;  
import java.util.GregorianCalendar;  
import java.util.Scanner;  
  
public class six {  
 public static void main(String[] args) {  
 GregorianCalendar year=new GregorianCalendar();  
 // System.out.println(today.get(Calendar.YEAR));  
  
  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.print("Enter your birth year: ");  
 int yearOfBirth = scanner.nextInt();  
 int currentYear = year.get(Calendar.*YEAR*);  
 int age = currentYear - yearOfBirth;  
 System.*out*.println("You were born in " + yearOfBirth + " and will be (are) " + age + " this year.");  
 scanner.close();  
 }  
 }

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Q\_07

package Q\_07;  
import java.util.Scanner;  
  
  
public class seven {  
 public static void main(String[] args) {  
  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.print("Enter your weight in kg: ");  
  
 double weight = scanner.nextDouble();  
 System.*out*.print("Enter your height in cm: ");  
 double height = scanner.nextDouble();  
  
 double bmi = weight / Math.*pow*((height / 100), 2);// In her convert cm to m  
 System.*out*.printf("Your BMI is: %.2f\n", bmi);  
 scanner.close();  
 }  
}

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Q\_08

package Q\_08;  
  
import java.util.Scanner;  
  
public class eight {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.print("Enter the radius of the sphere (m): ");  
 double r = scanner.nextDouble(); //r=radius  
  
 double volume = (4.0 / 3.0) \* (Math.*PI* \* Math.*pow*(r, 3));  
 System.*out*.printf("The volume of the sphere is: %.2f ", volume);//cubic units  
 scanner.close();  
 }  
 }

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Q\_09

package Q\_09;  
  
import java.util.Scanner;  
  
public class nine {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.print("Enter the principal amount: ");  
 double P = scanner.nextDouble();  
 System.*out*.print("Enter the annual interest rate (in %): ");  
 double R = scanner.nextDouble();  
 System.*out*.print("Enter the number of years: ");  
 int N = scanner.nextInt();  
  
 double finalAmount = P \* Math.*pow*((1 + (R / 100)), N);  
 System.*out*.printf("Total amount after %d years: %.2f\n", N, finalAmount);  
 scanner.close();  
  
 }  
}

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Q\_10

package Q\_10;  
  
import java.util.Scanner;  
  
public class ten {  
 public static void main(String[] args) {  
  
 Scanner scanner = new Scanner(System.*in*);  
  
 System.*out*.print("Enter loan amount: "); //lone amount  
 double loanAmount = scanner.nextDouble();  
  
 System.*out*.print("Enter annual interest rate (in %): ");  
 double annualInterestRate = scanner.nextDouble(); //annual interest rate  
  
  
 System.*out*.print("Enter loan period (in years): ");  
 int loanPeriod = scanner.nextInt(); //lone period  
  
  
 final int MONTHS\_IN\_YEAR = 12;  
 double monthlyInterestRate = annualInterestRate / 100 / MONTHS\_IN\_YEAR; //monthlyInterestRate  
  
 int numberOfPayments = loanPeriod \* MONTHS\_IN\_YEAR; //ex 4years \*12months  
  
 double monthlyPayment = (loanAmount \* monthlyInterestRate) /  
 (1 - Math.*pow*(1/(1 + monthlyInterestRate),numberOfPayments));  
  
  
 double totalPayment = monthlyPayment \* numberOfPayments;  
  
 System.*out*.printf("Monthly Payment: %.2f\n", monthlyPayment);  
 System.*out*.printf("Total Payment: %.2f\n", totalPayment);  
  
 scanner.close();  
  
 }  
}

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