**Lab worksheet 2: Numerical Data**

1. **Question**

**CODE:**

|  |
| --- |
| package Q\_1;  public class expression {  public static void main(String[] args) {  double B=4,A=3,C=2,X=5,Y=2;   System.*out*.println("(a) Square root of B² + 4AC: " + Math.*sqrt*(B \* B + 4 \* A \* C));  System.*out*.println("(b) Square root of X + 4Y³: " + Math.*sqrt*(X + 4 \* Math.*pow*(Y, 3)));  System.*out*.println("(c) Cube root of product of X and Y: " + Math.*cbrt*(X \* Y));  System.*out*.println("(d) Area of a circle: " + (Math.*PI* \* X \* X));  } } |

**OUTPUT:**

A screen shot of a computer

AI-generated content may be incorrect.

1. **Question**

**Code:**

|  |
| --- |
| package Q\_2;  import java.util.Scanner;  public class convert{  public static void main(String[] args) {   Scanner scanner = new Scanner(System.*in*);   System.*out*.print("Enter centimeters: ");  double cm = scanner.nextDouble();   double inches = cm / 2.54;  double feet = inches / 12;  double remainingInches = inches % 12;   System.*out*.println("Output: " + feet + " feet " + remainingInches + " inches");   scanner.close();  } } |

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_3;  import java.util.Scanner; public class celcious {  public static void main(String[] args) {    Scanner scanner = new Scanner(System.*in*);  System.*out*.print("Enter temperature in Celsius: ");  double celsius = scanner.nextDouble();  double fahrenheit = (1.8 \* celsius) + 32;  System.*out*.println("Temperature in Fahrenheit: " + fahrenheit);  scanner.close();  } } |

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_4;  import java.util.Scanner;  public class bodyweight {  public static void main(String[] args) {  Scanner scanner = new Scanner(System.*in*);   System.*out*.print("Enter body weight in pounds: ");  double bodyWeight = scanner.nextDouble();  double calories = bodyWeight \* 19;  System.*out*.printf("Daily calorie requirement: %.2f calories%n", calories);  scanner.close();  } } |

**Output:**

**A screen shot of a video

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_5;  import java.util.Scanner;  public class fahrenheit {  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) \* (fahrenheit - 32);  System.*out*.printf("%.2f Fahrenheit = %.2f Celsius%n", fahrenheit, celsius);  scanner.close();  } } |

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_6;  import java.util.Scanner; import java.time.Year;  public class age {  public static void main(String[] args) {  Scanner scanner = new Scanner(System.*in*);  System.*out*.print("Enter your birth year: ");  int birthYear = scanner.nextInt();  int currentYear = Year.*now*().getValue();  int age = currentYear - birthYear;   System.*out*.println("You were born in " + birthYear + " and will be (are) " + age + " this year.");  scanner.close();  } } |

**Output:**

**A computer screen with a black background

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| import java.util.Scanner;  public class bmi{  public static void main(String[] args) {  Scanner scanner = new Scanner(System.*in*);  System.*out*.print("Enter weight in kg: ");  int weight = scanner.nextInt();  System.*out*.print("Enter height in cm: ");  int height = scanner.nextInt();   double bmi = weight / Math.*pow*(height / 100.0, 2);  System.*out*.println("Your BMI is: " + bmi);  scanner.close();  } } |

**Output:**

**A screenshot of a computer

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_8;  import java.util.Scanner;  public class volume{  public static void main(String[] args) {   Scanner scanner = new Scanner(System.*in*);  System.*out*.print("Enter radiusc (r) of the sphere: ");  double r = scanner.nextDouble();   double volume = (4.0 / 3.0) \* Math.*PI* \* Math.*pow*(r, 3);  System.*out*.println("Volume of the sphere: " + volume);  scanner.close();  } } |

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_9;  import java.util.Scanner;  public class dollor{  public static void main(String[] args) {   Scanner scanner = new Scanner(System.*in*);  System.*out*.print("Enter principal amount (P): ");  double P = scanner.nextDouble();  System.*out*.print("Enter annual interest rate (R) in percent: ");  double R = scanner.nextDouble();  System.*out*.print("Enter number of years (N): ");  int N = scanner.nextInt();   double amount = P \* Math.*pow*(1 + (R / 100), N);  System.*out*.println("Total amount after " + N + " years: " + amount);  scanner.close();  } } |

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

1. **Question**

**Code:**

|  |
| --- |
| package Q\_10;  import java.util.Scanner;  public class loan {  public static void main(String[] args) {  final int MONTHS\_IN\_YEAR = 12;  Scanner scanner = new Scanner(System.*in*);   System.*out*.print("Enter loan amount: ");  double loanAmount = scanner.nextDouble();   System.*out*.print("Enter annual interest rate (%): ");  double annualInterestRate = scanner.nextDouble();   System.*out*.print("Enter loan period (years): ");  int loanPeriod = scanner.nextInt();   double monthlyInterestRate = annualInterestRate / 100.0 / MONTHS\_IN\_YEAR;  int numberOfPayments = loanPeriod \* MONTHS\_IN\_YEAR;   double monthlyPayment = (loanAmount \* monthlyInterestRate) /  (1 - Math.*pow*(1 / (1 + monthlyInterestRate), numberOfPayments));   double totalPayment = monthlyPayment \* numberOfPayments;   System.*out*.println("Monthly Payment: " + monthlyPayment);  System.*out*.println("Total Payment: " + totalPayment);   scanner.close();  } } |

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**