import java.util.Scanner;

public class CylinderCalculator {

public static void main(String[] args) {

// Create a Scanner object to read input from the user

Scanner scanner = new Scanner(System.in);

// Prompt the user to enter the radius and length of the cylinder

System.out.print("Enter the radius and length of a cylinder: ");

double radius = scanner.nextDouble();

double length = scanner.nextDouble();

// Calculate the area of the cylinder

double area = Math.PI \* radius \* radius;

// Calculate the volume of the cylinder

double volume = area \* length;

// Print the results

System.out.printf("The area is %.4f\n", area);

System.out.printf("The volume is %.1f\n", volume);

// Close the scanner

scanner.close();

}

}

import java.util.Scanner;

public class GratuityCalculator {

public static void main(String[] args) {

// Create a Scanner object to read input from the user

Scanner scanner = new Scanner(System.in);

// Prompt the user to enter the subtotal and gratuity rate

System.out.print("Enter the subtotal and a gratuity rate: ");

double subtotal = scanner.nextDouble();

double gratuityRate = scanner.nextDouble();

// Calculate the gratuity

double gratuity = subtotal \* (gratuityRate / 100);

// Calculate the total

double total = subtotal + gratuity;

// Display the results

System.out.printf("The gratuity is $%.1f and total is $%.1f\n", gratuity, total);

// Close the scanner

scanner.close();

}

}

import java.util.Scanner;

public class BMICalculator {

public static void main(String[] args) {

// Create a Scanner object to read input from the user

Scanner scanner = new Scanner(System.in);

// Prompt the user to enter weight in pounds

System.out.print("Enter weight in pounds: ");

double weightInPounds = scanner.nextDouble();

// Prompt the user to enter height in inches

System.out.print("Enter height in inches: ");

double heightInInches = scanner.nextDouble();

// Convert weight from pounds to kilograms

double weightInKilograms = weightInPounds \* 0.45359237;

// Convert height from inches to meters

double heightInMeters = heightInInches \* 0.0254;

// Calculate BMI using the formula: BMI = weight (kg) / (height (m) \* height (m))

double bmi = weightInKilograms / (heightInMeters \* heightInMeters);

// Display the BMI

System.out.printf("BMI is %.4f\n", bmi);

// Close the scanner

scanner.close();

}

}

import java.util.Scanner;

public class DrivingCostCalculator {

public static void main(String[] args) {

// Create a Scanner object to read input from the user

Scanner scanner = new Scanner(System.in);

// Prompt the user to enter the driving distance

System.out.print("Enter the driving distance (miles): ");

double distance = scanner.nextDouble();

// Prompt the user to enter the fuel efficiency in miles per gallon

System.out.print("Enter miles per gallon: ");

double mpg = scanner.nextDouble();

// Prompt the user to enter the price per gallon

System.out.print("Enter price per gallon: ");

double pricePerGallon = scanner.nextDouble();

// Calculate the total gallons needed

double gallonsNeeded = distance / mpg;

// Calculate the total cost of the trip

double totalCost = gallonsNeeded \* pricePerGallon;

// Display the cost of the trip

System.out.printf("The cost of driving is $%.2f

", totalCost);

// Close the scanner

scanner.close();

}

}

import java.util.Scanner;

public class HexagonArea {

public static void main(String[] args) {

// Create a Scanner object to read input from the user

Scanner scanner = new Scanner(System.in);

// Prompt the user to enter the length of the side of the hexagon

System.out.print("Enter the length of the side: ");

double sideLength = scanner.nextDouble();

// Calculate the area of the hexagon using the formula

double area = (3 \* Math.sqrt(3) / 2) \* Math.pow(sideLength, 2);

// Display the area of the hexagon

System.out.printf("The area of the hexagon is %.5f\n", area);

// Close the scanner

scanner.close();

}

}

import java.util.Scanner;

public class CompoundValue {

public static void main(String[] args) {

// Create a Scanner object to read input from the user

Scanner scanner = new Scanner(System.in);

// Prompt the user to enter the monthly saving amount

System.out.print("Enter the monthly saving amount: ");

double monthlySavingAmount = scanner.nextDouble();

// Define the annual interest rate and convert it to a monthly interest rate

double annualInterestRate = 0.05;

double monthlyInterestRate = annualInterestRate / 12;

// Initialize the account value

double accountValue = 0.0;

// Calculate the account value after the sixth month

for (int month = 1; month <= 6; month++) {

accountValue = (accountValue + monthlySavingAmount) \* (1 + monthlyInterestRate);

}

// Display the account value after the sixth month

System.out.printf("After the sixth month, the account value is $%.2f\n", accountValue);

// Close the scanner

scanner.close();

}

}