**1. Variables and Data Types**

**Exercise 1:**  
Declare variables to store the following information and print them:

* Your name (String)
* Your age (int)
* Your height in meters (double)
* Whether you are a student (boolean)
* Whether you are an Indian (boolean)

**2. Arithmetic Operations**

**Exercise 2:**  
Calculate the sum, difference, product, and quotient of two numbers.

**3. Type Casting**

**Exercise 3:**  
Convert a double to an int and display both values.

**4. String Concatenation**

**Exercise 4:**  
Concatenate first and last names and display the full name.

**5. Constants**

**Exercise 5:**  
Declare a constant for the value of PI and calculate the circumference of a circle with a given radius.

**6. String Concatenation**

**Exercise 6:**  
Create two String variables: one for your first name and another for your last name. Concatenate them to form your full name and print it.

**7. Arithmetic Operations**

**Exercise 7:**  
Declare two int variables, assign them values, and calculate their sum, difference, product, and quotient. Print all the results.

**8. Type Casting**

**Exercise 8:**  
Declare a double variable with a decimal value and cast it to an int. Print both values to observe the difference.

**9. Constants with final**

**Exercise 9:**  
Declare a constant value for Pi using final and calculate the area of a circle with radius 5. Print the result.

**10. Character Data Type**

**Exercise 10:**  
Declare a char variable to store the first letter of your name and print its ASCII value.

**11. Accepting String Input**

**Exercise 11:**  
Ask the user to enter their **name** and print a greeting message.

**12. Accepting Integer Input**

**Exercise 12:**  
Ask the user to enter their **age** and print it.

**13. Adding Two Numbers**

**Exercise 13:**  
Ask the user to enter two numbers and print their **sum**.

**14. Calculating Area of a Rectangle**

**Exercise 14:**  
Ask the user to enter the **length** and **width** of a rectangle. Calculate and print the **area**.

**15. Simple Interest Calculation**

**Exercise 15:**  
Ask the user to enter the **principal amount**, **rate of interest**, and **time** (in years). Calculate and print the **simple interest** using the formula:  
Simple Interest= principal \* time \* interest / 100

**16. Calculate the Area of a Rectangle**

**Exercise 16:**  
Ask the user to input the **length** and **width** of a rectangle. Calculate and display the area.

**17. Swap Two Numbers**

**Exercise 17:**  
Ask the user to input two numbers and swap their values without using a temporary variable. Display the swapped values.

**18. Convert Temperature from Celsius to Fahrenheit**

**Exercise 18:**  
Ask the user to input a temperature in Celsius and convert it to Fahrenheit. Display the result.

**19. Calculate BMI (Body Mass Index)**

**Exercise 19:**  
Ask the user to input their **weight in kilograms** and **height in meters**. Calculate and display their BMI.

**20. Calculate the Total Price with Tax**

**Exercise 20:**  
Ask the user to input the **price of a product** and the **tax rate** (as a percentage). Calculate and display the **total price** including tax.

**21. Swap Two Numbers Without Using a Temporary Variable**

**Exercise 21:**  
Ask the user to input two numbers. Swap the values **without using a third (temporary) variable** and display the results.

**22. Calculate the Average of Three Numbers**

**Exercise 22:**  
Ask the user to input **three numbers** and calculate their **average**.

**23. Convert Days into Years, Months, and Days**

**Exercise 23:**  
Ask the user to input the **total number of days**. Convert and display the equivalent in **years**, **months**, and **days** (assuming 1 year = 365 days and 1 month = 30 days).

**24. Calculate the Distance Between Two Points**

**Exercise 24:**  
Ask the user to input the coordinates of two points and calculate the **distance** between them.

**25. Calculate the Compound Interest**

**Exercise 25:**

Ask the user to input the principal amount, rate of interest, time in years, and the number of times interest is compounded annually. Calculate and display the compound interest using the formula:

𝐴 = 𝑃(1+𝑟/𝑛)\*\*𝑛𝑡

Where:

A is the amount of money accumulated after interest.

P is the principal amount.

r is the rate of interest.

n is the number of times interest applied per time period.

t is the time the money is invested for.

**26. Calculate the Area of a Circle**

**Exercise 26:**

Ask the user to input the radius of a circle. Calculate the area using the formula:

Area = 𝜋 × 𝑟\*\*2

Where

r is the radius of the circle.

**27. Calculate the Square Root of a Number**

**Exercise 27:**

Ask the user to input a positive number and calculate its square root using the Math.sqrt() function. Display the result.

**28. Calculate the Volume of a Cylinder**

**Exercise 28:**

Ask the user to input the radius and height of a cylinder. Calculate its volume using the formula:

Volume = π×r\*\*2×h

Where

r is the radius, and

h is the height.

**29. Calculate the Volume of a Sphere**

**Exercise 29:**  
Ask the user to input the **radius** of a sphere. Calculate its **volume** using the formula:  
Volume= (3/4) ​πr\*\*\*3

Where r is the radius.

**30. Calculate the Average of Three Numbers**

**Exercise 30:**  
Ask the user to input three numbers. Calculate the **average** of these numbers and display the result.

**31. Calculate the Circumference of a Circle**

**Exercise 31:**  
Ask the user to input the **radius** of a circle. Calculate the **circumference** using the formula:  
Circumference=2πr  
Where r is the radius.

**32. Convert Kilometers to Miles**

**Exercise 32:**  
Ask the user to input a distance in **kilometers**. Convert it to **miles** using the conversion factor:  
1 kilometer=0.621371 miles

Display the result.