Problem 1: Age in Dog Years

Question: Write a Java program that takes a user's age as input and calculates their age in dog years. (1 human year = 7 dog years)

Example:

```java
java

Enter your age: 5
```

Sample Input and Output:

```
Input: 5
Output: Your age in dog years is 35
```

Problem 2: Area of a Rectangle

Question: Write a Java program that takes the length and width of a rectangle as input and calculates its area.

Example:

```java
java

Enter the length: 10
Enter the width: 5
```

Sample Input and Output:

```
Input: 10 5
Output: The area of the rectangle is 50
```

Problem 3: Positive, Negative, or Zero

Question: Write a Java program that takes a number as input and outputs whether it is positive, negative, or zero.

Example:

```java
java

Enter a number: -7
```

Sample Input and Output:

```
Input: -7
```

```
Output: The number is negative
```

Problem 4: Celsius to Fahrenheit

Question: Write a Java program that takes a temperature in Celsius as input and converts it to Fahrenheit. (Formula: F = C * 9/5 + 32)

Example:

```java
Enter temperature in Celsius: 25
```

Sample Input and Output:

```
Input: 25
Output: The temperature in Fahrenheit is 77.0
```

Problem 5: Total Salary

Question: Write a Java program that takes hourly wage and number of hours worked as input and calculates the total salary.

Example:

```java
Enter hourly wage: 20
Enter hours worked: 35
```

Sample Input and Output:

```
Input: 20 35
Output: The total salary is 700
```

Problem 6: Even or Odd

Question: Write a Java program that takes a number as input and outputs whether it is even or odd.

Example:

```java
Enter a number: 4
```

Sample Input and Output:

```
Input: 4
Output: The number is even
```

Problem 7: Simple Interest

Question: Write a Java program that takes principal, rate of interest, and time as input and calculates the simple interest. (Formula: SI = (P * R * T) / 100)

Example:

```
java

Enter principal: 1000
Enter rate of interest: 5
Enter time (years): 2
```

Sample Input and Output:

```
Input: 1000 5 2
Output: The simple interest is 100.0
```

Problem 8: Sum of Two Numbers

Question: Write a Java program that takes two numbers as input and outputs their sum.

Example:

```
java

Enter the first number: 10
Enter the second number: 20
```

Sample Input and Output:

```
Input: 10 20
Output: The sum is 30
```

Problem 9: Greater of Two Numbers

Question: Write a Java program that takes two numbers as input and outputs the greater number.

Example:

```
java

Enter the first number: 15
Enter the second number: 10
```

Sample Input and Output:

```
Input: 15 10
Output: The greater number is 15
```

Problem 10: Average of Three Numbers

Question: Write a Java program that takes three numbers as input and calculates their average.

Example:

```
java

Enter the first number: 10
Enter the second number: 20
Enter the third number: 30
```

Sample Input and Output:

```
Input: 10 20 30
Output: The average is 20.0
```

Problem 11: Square of a Number

Question: Write a Java program that takes a number as input and outputs its square.

Example:

```
java

Enter a number: 5
```

Sample Input and Output:

```
Input: 5
Output: The square of the number is 25
```

Problem 12: Remainder Calculation

Question: Write a Java program that takes two numbers as input and outputs the remainder when the first number is divided by the second.

Example:

```
java

Enter the dividend: 17
```

```
Enter the divisor: 3
```

Sample Input and Output:

```
Input: 17 3
Output: The remainder is 2
```

Problem 13: Hours to Minutes

Question: Write a Java program that takes time in hours as input and converts it to minutes.

Example:

```java
```

```
Enter time in hours: 2
```

Sample Input and Output:

```
Input: 2
Output: The time in minutes is 120
```

Problem 14: Swap Values

Question: Write a Java program that takes two numbers as input and swaps their values.

Example:

```java
```

```
Enter the first number: 10
Enter the second number: 20
```

Sample Input and Output:

```
Input: 10 20
Output: After swapping, first number is 20 and second number is 10
```

Problem 15: Perimeter of a Square

Question: Write a Java program that takes the side length of a square as input and calculates its perimeter.

Example:

```java
```

```
Enter the side length of the square: 5
```

```
Input: 5
Output: The perimeter of the square is 20
```

Problem 16: Days in Weeks

Question: Write a Java program that takes a number of weeks as input and calculates the total number of days.

Example:

```
java
```

```
Enter the number of weeks: 3
```

Sample Input and Output:

```
Input: 3
Output: The number of days is 21
```

Problem 17: Kilometers to Miles

Question: Write a Java program that takes a distance in kilometers as input and converts it to miles. (1 km = 0.621371 miles)

Example:

```
java
```

```
Enter distance in kilometers: 10
```

Sample Input and Output:

```
Input: 10
Output: The distance in miles is 6.21371
```

Problem 18: Sum of Digits

Question: Write a Java program that takes a number as input and calculates the sum of its digits.

Example:

```
java
```

```
Enter a number: 123
```

Sample Input and Output:

```
Input: 123
Output: The sum of the digits is 6
```

Problem 19: Leap Year Check

Question: Write a Java program that takes a year as input and checks if it is a leap year.

Example:

```
java

Enter a year: 2020
```

Sample Input and Output:

```
Input: 2020
Output: The year is a leap year
```

Problem 20: BMI Calculation

Question: Write a Java program that takes weight (in kilograms) and height (in meters) as input and calculates the BMI. (Formula: BMI = weight / (height * height))

Example:

```
java

Enter weight in kilograms: 70
Enter height in meters: 1.75
```

Sample Input and Output:

```
Input: 70 1.75
Output: The BMI is 22.857142857142858
```