

Tutorial 1.1

1. Create a program that reads the length and width of a farmer's field from the user in feet. Display the area of the field in acres. **Hint:** There are 43,560 square feet in an acre. Sample Input 1000 1000
Sample Output 22.95684113865932 acres

Code:

```
import java.util.Scanner;
class Area
{
    public static void main(String args[])
    {
        Scanner obj=new Scanner(System.in);
        int l=obj.nextInt();
        int w=obj.nextInt();
        double a=l*w;
        double acres= a/43560;
        System.out.println(acres+"acres");
    }
}
```

2. An online retailer sells two products: widgets and gizmos. Each widget weighs 75 grams. Each gizmo weighs 112 grams. Write a program that reads the number of widgets and the number of gizmos from the user. Then your program should compute and display the total weight of the parts.

Sample Input: 10 20

Sample Output: The total weight of all these widgets and gizmos is 2990 grams.

Code:

```
import java.util.Scanner;
class Weight
{
    public static void main(String args[])
    {
        Scanner obj=new Scanner(System.in);
        int w=obj.nextInt();
        int g= new obj.nextInt();
        int total = (w*75)+(g*112)
        System.out.println("the total weight of all these widgets and gizmos is"+total+"grams");
    }
}
```

3. In many jurisdictions, a small deposit is added to drink containers to encourage people to recycle them. In one particular jurisdiction, drink containers holding one liter or less have a \$0.10 deposit and drink containers holding more than one liter have a \$0.25 deposit. Write a program that reads the number of containers of each size(less and more) from the user. Your program should continue by computing and displaying the refund that will be received for returning those containers. Format the output so that it includes a dollar sign and

always displays exactly two decimal places.

Sample Input 10 20

Sample Output Your total refund will be \$6.00.

Code:

```
import java.util.Scanner;
class Refund
{
    public static void main(String args[])
    {
        Scanner obj = new Scanner(System.in);
        float c1= obj.nextFloat();
        float c2= obj.nextFloat();
        float r=c1*0.10f+c2*0.25f;
        System.out.println("Your total refund will be"+"$"+String.format("%.2f",r));
    }
}
```

4. Write a program to find whether the given input number is Odd. If the given number is odd, the program should return 2 else It should return 1.

Code:

```
import java.util.Scanner;
class Odd
{
    public static void main(String args[])
    {
        Scanner obj= new Scanner(System.in);
        int n= obj.nextInt();
        int result=n%2!=0?2:1;
        System.out.println("result:"+result);
    }
}
```

5. Write a program that returns the last digit of the given number. Last digit is being referred to the least significant digit i.e. the digit in the ones (units) place in the given number. The last digit should be returned as a positive number.

For example,

if the given number is 197, the last digit is 7. if the given number is -197, the last digit is 7

Code:

```
import java.util.Scanner;
class Lastdigit
{
    public static void main(String args[])
    { Scanner obj= new Scanner(System.in);
      int n= obj.nextInt();
```

```

int result=Math.abs(n)%10;
System.out.println("the last digit is:"+result);
}
}

```

6. Rohit wants to add the last digits of two given numbers.

For example,

If the given numbers are 267 and 154, the output should be 11.

Below is the explanation:

Last digit of the 267 is 7

Last digit of the 154 is 4

Sum of 7 and 4 = 11

Write a program to help Rohit achieve this for any given two numbers.

Note: The sign of the input numbers should be ignored.

If the input numbers are 267 and 154, the sum of last two digits should be

11 if the input numbers are 267 and -154, the sum of last two digits should

be 11 if the input numbers are -267 and 154, the sum of last two digits

should be 11 if the input numbers are -267 and -154, the sum of last two

digits should be 11

Code:

```

import java.util.Scanner;
class Sum
{
    public static void main(String args[])
    {
        Scanner obj = new Scanner(System.in);
        int n= obj.nextInt();
        int m= obj.nextInt();
        int result=Math.abs(n)%10 + Math.abs(m)%10;
        System.out.println("The sum of last two digits:"+result);
    }
}

```

7. Complete the program to convert days into years, month and days. (Ignoring leap year and considering 1 month is 30 days)

Input 375 Output YEARS: 1 MONTH: 0 DAYS: 10

Input 200 Output YEARS: 0 MONTH: 6 DAYS: 20

Code:

```

import java.util.Scanner;
class calender
{
    public static void main(String args[])
    { Scanner obj=new Scanner(System.in);
      int days=obj.nextInt();
      int y=days>365?days/365:0;
      int r=days>365?days%365:days;
      int m=r>30?r/30:0;
      int d=r>30?r%30:r;
      System.out.println("Years:"+y+" Month:"+m+" Days:"+d);
    }
}

```

```
}
```

8. Write a program that returns the second last digit of the given number. Second last digit is being referred to the digit in the tens place in the given number. For example, if the given number is 197, the second last digit is 9. Note1 - The second last digit should be returned as a positive number. i.e. if the given number is -197, the second last digit is 9. Note2 - If the given number is a single digit number, then the second last digit does not exist. In such cases, the program should return -1. i.e. if the given number is 5, the second last digit should be returned as 0.

Code:

```
import java.util.Scanner;

class TwoDigit
{
    public static void main(String args[])
    {
        Scanner obj = new Scanner(System.in);
        int n= obj.nextInt();
        int q=n/10;
        int result=q%10;
        System.out.println("The second last digit:"+result);
    }
}
```