

TUTORIAL 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

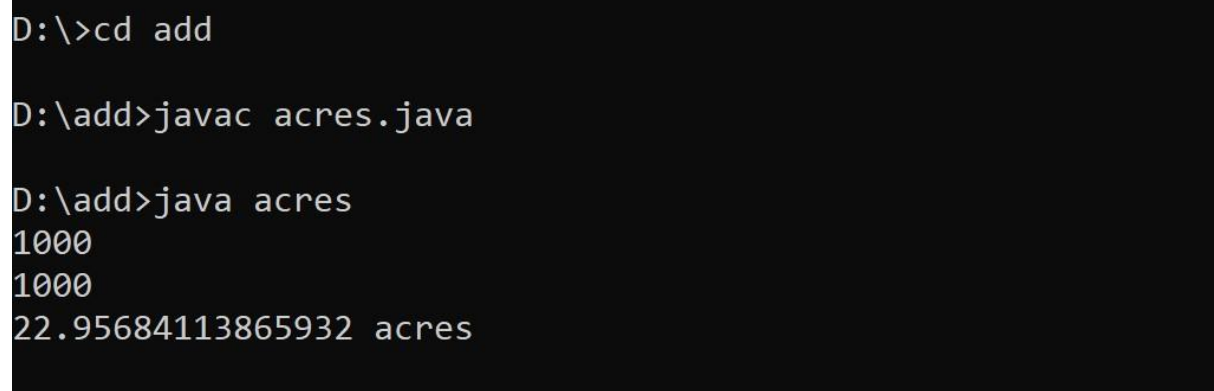
Sample Output 22.95684113865932 acres

Code:

```
import java.util.*;

class acres
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        double length=sc.nextDouble();
        double width=sc.nextDouble();
        double a = (length*width)/43560;
        System.out.println(""+a+" acres");
    }
}
```

Output:



```
D:\>cd add

D:\add>javac acres.java

D:\add>java acres
1000
1000
22.95684113865932 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.*;

class widgets
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int widgets=sc.nextInt();
        int gizmos=sc.nextInt();
        int a = (widgets*75)+(gizmos*112);
        System.out.println("The total weight of all these widgets and gizmos is "+a+" grams.");
    }
}
```

Output:

```
D:\add>javac widgets.java
D:\add>java widgets
10
20
The total weight of all these widgets and gizmos is 2990 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.*;

class deposit
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);

        double a = sc.nextDouble();
        double b = sc.nextDouble();
        double c = (a*0.10)+(b*0.25);

        System.out.printf("Your total refund will be $%.2f.%n",c);
    }
}
```

Output:

```
D:\add>javac deposit.java

D:\add>java deposit
10
20
Your total refund will be $6.00.
```

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.*;

class odd

{
public static void main(String[] args)
{
Scanner sc = new Scanner(System.in);
int a=sc.nextInt();
if(a%2!=0)
{
System.out.println("2");
}
else
{
System.out.println("1");
}
}
}
```

Output:

```
D:\add>java odd
1
2

D:\add>java odd
44
1
```

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.*;

class last
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int a=sc.nextInt();
        int b=a%10;
        System.out.println(""+Math.abs(b));
    }
}
```

Output:

```
D:\add>java last
197
7

D:\add>java last
-197
7

D:\add>_
```

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.*;

class Ldigit
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int a=sc.nextInt();
        int b=sc.nextInt();
        int c=(Math.abs(a))%10;
```

```

int d=(Math.abs(b))%10;
int e=c+d;
System.out.println("Sum of "+c+" and "+d+" = "+e);
}
}

```

Output:

```

D:\add>javac ldigit.java

D:\add>java ldigit
-267
154
Sum of 7 and 4 = 11

```

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.*;

class year
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int a=sc.nextInt();
        int b=a/365;
        int c=a%365/30;
        int d=a%365%30;
        System.out.println("YEARS: "+b+" MONTHS: "+c+" DAYS: "+d);
    }
}

```

Output:

```
D:\add>javac year.java
D:\add>java year
375
YEARS: 1 MONTHS: 0 DAYS: 10
```

8. Write a program that returns the second last digit of the given number. Second last digit is being referred 10th 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.*;
class second
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int a=sc.nextInt();
        int b=Math.abs(a);
        int c=b%10;
        int d=b/10;
        if(c==b)
        {
            System.out.println("-1");
        }
        else
```



```
{  
    System.out.println(""+(d%10));  
}  
}  
}
```

Output:

```
D:\add>javac second.java
```

```
D:\add>java second  
-197  
9
```