LAB 2

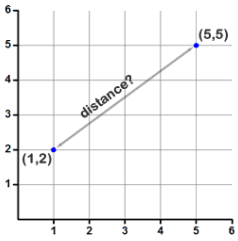
1- Write a program that takes a **number** (***X***) from the user and then prints the value of the following items:

$|X|$ $\sqrt[4]{X}$ e^X

Example:

```
Input: 16
Outputs:  |X|=16   ∜X =2    e^X = 8886110.52
```

2- Write a program that calculates the distance between **two points**: (x1, y1) and (x2, y2).



Example:

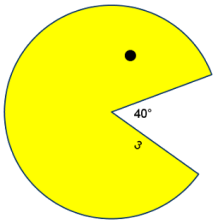
```
Inputs: 1 2     5 5
Output: 5
```

3- Write a program for ***lottery (Sayısal Loto)*** which generates 6 random numbers between 1 and 49.

Example:

```
(there is no any input)
Output: 6  34   2   26  7  45
```

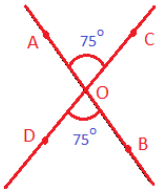
4- Write a program that finds the area and perimeter of **PacMan**.



5- Write a program that converts a measurement given in *degree* to the equivalent number of *radian, revolution,* and *sign*.

Hint:

- 1 circle = 360 degrees = 400 grades = 21600 minutes = 6.28318 radians = 12 signs



6- Write a program that reads an integer between 1 and 99, then adds the **digits** in the integer. For example, if an integer is 93, the sum of its digits is 12.

7- Write a program which that takes the values of ***a, b*** and ***x*** from the user and calculates the result of the following mathematical formula:

$$\int \sqrt{ax+b}\,dx = \frac{2\sqrt{(ax+b)^3}}{3a}$$

Example:

```
Inputs:  a=1   b=2   x=2
Output:  5.3333
```