1. Let find , then round the result to the nearest integer toward
2. Let calculate the **square root**, natural logarithm and factorial of each element of the matrix
3. By using **colon** enter the matrix
4. Let show that
5. The elements in **second column**
6. The elements in **third row**
7. The **rows 2** to **3** and **column 1** to **3**
8. Let explain the perform the following commands

* Remove the **second** column of
* Add a row of all **1's** at the beginning
* Swap the **2nd** column and the **last** column
* Create a **diagonal** of

1. Let A = [1:4; 5:8; 1 1 1 1]. Predict and check the result of:

x = A(:, 3)

B = A(1 : 3, 2 : 2)

A(1, 1) = 9 + A(2, 3)

A(2 : 3, 1 : 3) = [0 0 0; 0 0 0]

A(2 : 3, 1 : 2) = [1 1; 3 3]

y = A(3 : 3, 1 : 4)

A = [A; 2 1 7 7; 7 7 4 5]

C = A([1, 3], 2)

D = A([2, 3, 5], [1, 3, 4])

D(2, :) = [ ]

1. Let **A = [4 5 9 6]**.

* Subtract **3** from each element.
* Add **11** to the **odd**-index elements.
* Compute the **square root** of each element.
* Raise to the **power 3** each element.

1. Consider the matrix find the determinant and inverse of matrix.
2. Write a program to input any square matrix and to find and print its determinant and inverse if exist.
3. Write a program to calculate the area of a rectangle.
4. Write a program to input three marks of a student and to calculate his/her average.
5. Write a program that calculate the and coordinates of the point whose polar coordinates are and
6. Write a **program** to calculate the value of the expression

for , , and .

1. Write a **program** to **input** two integer number and and to find and **print** the addition, subtraction, multiplication, division and reminder of them.
2. Write a program to input your mark in one subject and to test it whether you are passed or not?
3. Write a program to input the value of and to find and print the value of y such that
4. Suppose the standard time for study is 3 hours, Write a program that determine the hours that a student practice is enough or not.
5. Write a program to find the greatest number between three integer numbers , and .
6. Write a program that accepts a number as a temperature, **if** the number that is entered is degree **Fahrenheit** the program must be **convert** the number to the equivalent degrees **Celsius** (and vice versa) finally print a suitable message for each case.
7. Write a program to calculate the value of such that
8. Write a program to input two integer numbers and , and to test whether is divisible by or not.
9. Write a program to find the **area** of the **circle**.
10. Write a program to input a number and prints out a message to say if it **negative** or **non-negative**.
11. Write a program to input the marks of two students and to find the **average** of each of them.
12. Give **MATLAB** code to calculate where when and when .
13. The value of is when ; when is in and otherwise. Calculate .
14. Write a program to input a number and determine whether it is **non-positive** or **even** or **odd**.
15. Write a program to determine going to the theater with respect to the amount of dollar. **If** you have **5** dollars go to the dollar theater, **if** you have **10** dollars go to the regular theater, **if** you have **100** dollars, go to a Broadway play, **else** **if** you have **1,000,000** dollars, buy a theater.
16. Write a program to calculate the value of such that
17. Write a **MATLAB** if statement to calculate where if , if is in and otherwise.
18. Write a program to calculate the value of such that
19. Write a program to input any integer number and to find the value of such that.
20. Using switch case statement write a program to input the degree (mark) of a student in one subject and to print his/her grade.
21. Write a program that accept the name of the **month** and print the number of **days** of it. (we now that the number of days in a particular month are as below **Sep**, **Apr**, **Jun**, **Nov**: **30** days and all other's have **31** days except **Feb** alone which has **28** days on **Clear** and **29** days on **Leap** year)
22. Write a program to input a number as **length** of any thing (with any unit of length) and to **convert** it according to the certain unit such that meter.

1 inch=2.54 cm=0.0254 m

1 foot= 30.48 cm=0.3048 m

1 yard= 91.44 cm=0.9144 m

1 mile=1609 cm=16.09 m

1 centimeter=0.01 m

1. Write a program to input a natural number from1 to 12 and to print the name of month corresponding to this number after inputting it directly
2. Write a program to write the units of each of the following cases.
3. Write a program to find the **square** of numbers from 1 to 4 in steps of 0.5.
4. Write a program to find the **root** of numbers 25,9, 81.
5. Write a program to find the **summation** of **even** numbers from 1 to 100.
6. Write a program to find and print the **factorial** of a natural number .
7. Write a program to input **random** natural number and to find the **average** of them.
8. Write a program to find and print the value of such that
9. Write a program to input the value of and to find the value of such that

A picture containing schematic

Description automatically generated

1. Write a program to input the value of and to find the value of such that

A picture containing schematic

Description automatically generated

1. write a program to input the marks of students and to find and print the **average** and the number of marks of each student.
2. Write a program to input the marks of male and female students and to calculate and print their **average** separately according to their sex.
3. Write a program to **input** the marks of **n** students (in **m** subjects) and to find and print their **averages** according to the **units** of the subjects.
4. Write a program to input the marks of a student (in **m** subjects) if she/he **passed** in the all the subjects you must find his/her **average**, and if he/she **failed** in one or some subjects , then you must print the number of these subjects.
5. In an 3\*4 matrix **A** and **interchanged** it to 2\*6 matrix **B**.
6. Write a program to **input** any **matrix** **A** and to find and print the **max** and **min** number in the matrix.
7. Write a program to **input** the **square matrix A** and then **swap** the element of the **main diagonal** with the elements of **row 3**.
8. Write a program to **input** the **square matrix A** and then **swap** the element of the **main diagonal** with the elements of the **secondary diagonal**.
9. Write a program to find the **summation** of the numbers that is **divided** by **5** [from **1** to **80**].
10. Write a program to find the **summation** of **odd** numbers and the number of **even** numbers from 0 to n.
11. Write a program to input **n** **random** natural numbers and to find and print the **factorial** of each of them.(**without** using the factorial function and use the while loop)
12. Write a program to input **n random** natural numbers and to print only the **multiplicative** of number 4 and their average if exist(**using while loop**).
13. Write a program to **input** two real numbers and to find and print the **summation** of them(define the sum by a **function**)
14. Write a program to **input** three degrees of a student and to find his/her **averages** (using **function**) and to indicate if he/she is passed or not?
15. Write a program to input n random real numbers x and to find the value of corresponding to each value of (define the value of as a function).
16. Using **function** write a program to **input** the **square matrix**  and find and print the **multiplication** of diagonal elements.
17. Using **function** write a program to find the number of **digits** of any natural number that is entered by the user.