

**Note: `>>` means user input**

**P1)**

### Examples:

# Welcome to FCI Calculator

## 1- Perform Addition

## 2- Perform Subtraction

### 3- Exit

 $\gg 1$ 

>> 123456789012345678901234567890

```
num1 = 123456789012345678901234567890
```

>> 113456789011345678901134567890

```
num2 = 113456789011345678901134567890
```

num1 + num2 = 236913578023691357802369135780

# Welcome to FCI Calculator

### 1- Perform Addition

## 2- Perform Subtraction

### 3- Exit

 $\gg 2$ 

```
>> 1230000000000000000
```

```
num1 = 123000000000000000001
```

>> 3000000000000000001

```
num2 = 3000000000000000001
```

```
num1 - num2 = 12000000000000000000
```

# Welcome to FCI Calculator

### 1- Perform Addition

## 2- Perform Subtraction

### 3- Exit

```
>> 1
>> - 12300000000000000001
num1 = - 12300000000000000001
>> 3000000000000000001
num2 = 3000000000000000001
num1 + num2 = - 12000000000000000000
```

Welcome to FCI Calculator

-----

- 1- Perform Addition
- 2- Perform Subtraction
- 3- Exit

```
>> 3
```

## P2)

**Example:**

**Output:**

Welcome to FCI Fraction Calculator

-----

- 1- Perform Fraction Addition
- 2- Perform Fraction Subtraction
- 3- Perform Fraction Multiplication
- 4- Exit

```
>> 1
>> 1 / 2
>> 1 / 4
3 / 4
```

Welcome to FCI Fraction Calculator

-----

- 1- Perform Fraction Addition
- 2- Perform Fraction Subtraction
- 3- Perform Fraction Multiplication
- 4- Exit

```
>> 2
>> 1 / 4
1 / 2
```

Welcome to FCI Fraction Calculator

-----  
1- Perform Fraction Addition  
2- Perform Fraction Subtraction  
3- Perform Fraction Multiplication  
4- Exit  
>> 4

### **P3)**

#### **Example:**

Welcome to FCI Matrix Calculator

-----  
1- Perform Matrix Addition  
2- Perform Matrix Subtraction  
3- Perform Matrix Multiplication  
4- Matrix Transpose

#### **Input:**

1  
2 2

5 5  
5 5

2 2

3 1  
1 3

#### **Output:**

8 6  
6 8

### **P4)**

#### **Examples:**

**Input:** 2 3

**Output:** 8

-----  
**Input:** 3 2

**Output: 9**

---

**Input: 2 4**

**Output: 16**

**P5)**

**Example:**

**Input :** ABCA

**Output :** AABC AACB ABAC ABCA ACBA

ACAB BAAC BACA BCAA CABA

CAAB CBAA

**P6)**

**Examples:**

**Input:**

Osama Ahmed

3

1

**Output:**

True

(1) Osama

(2) Ahmed

(3) Osama

---

**Input:**

Osama Ahmed

4

1

**Output:**

False

(1) Osama

(2) Ahmed

(3) Ahmed