1. Write a Python function to add two matrices of the same dimensions. Given matrices `A` and `B`, create a new matrix `C` where each element `C[i] [j]` is the sum of the corresponding elements from `A` and `B`.

```
A = [[1, 2], [3, 4]]
B = [[5, 6], [7, 8]]
Result C = [[6, 8],[10, 12]]
```

2. Description: Implement a function that takes matrices `A` and `B` as input and returns their matrix product if multiplication is possible. The resulting matrix `C` should have dimensions `(rows of A) x (columns of B)`.

```
A = [[1, 2], [3, 4]]
B = [[5, 6], [7, 8]]
Result C = [[19, 22], [43, 50]]
```

3. Write a Python program to find the transpose of a given matrix `A`. The transpose of a matrix is obtained by swapping its rows and columns, creating a new matrix where the rows of `A` become columns in the transpose.

```
A = [[1, 2, 3], [4, 5, 6]]
Transpose = [[1, 4],
             [2, 5],
             [3, 6]]
```

4. Create a function that takes a square matrix `A` as input and calculates the sum of its diagonal elements. The diagonal elements are those where the row index is equal to the column index.

```
A = [[1, 2, 3],
     [4, 5, 6],
     [7, 8, 9]]

Diagonal Sum = 1 + 5 + 9 = 15
```

5. Implement a function to determine whether a given square matrix `A` is an identity matrix. An identity matrix is a square matrix with ones on its main diagonal and zeros everywhere else.

```
A = [[1, 0, 0], [0, 1, 0], [0, 0, 1]]
Identity Matrix: True
```