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11. Perform vectorized implementation of simple matrix operation like finding the transpose of a matrix, adding, subtracting or multiplying two matrices.

```python
import numpy as np
A = np.array([[3, 6, 9], [5, -10, 15], [-7, 14, 21]])
B = np.array([[9, -18, 27], [11, 22, 33], [13, -26, 39]])
print("A = \n", A, "\nB = \n", B)
```

```
A =
 [[  3   6   9]
 [  5 -10  15]
 [ -7  14  21]]
B =
 [[  9 -18  27]
 [ 11  22  33]
 [ 13 -26  39]]
```

```python
# Addition
A + B
```

```
array([[ 12, -12,  36],
       [ 16,  12,  48],
       [  6, -12,  60]])
```

```python
# Subtraction
A - B
```

```
array([[ -6,  24, -18],
       [ -6, -32, -18],
       [-20,  40, -18]])
```

```python
# Multiplication
A @ B
```

```
# Multiplication
A @ B
```
[60]

```
... array([[ 210, -156,  630],
           [ 130, -700,  390],
           [ 364, -112, 1092]])
```

```
# Transpose
print("A' = \n", np.transpose(A),
      "\nB' = \n", np.transpose(B))
```
[61]

```
... A' =
     [[  3   5  -7]
      [  6 -10  14]
      [  9  15  21]]
    B' =
     [[  9  11  13]
      [-18  22 -26]
      [ 27  33  39]]
```