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This program demonstrates transposition of vectors as well as concatenation.

```
array1 = [(0:2:20)',ones(11,4),(10:-1:0)']
```

```
array1 = 11×6
     0     1     1     1     1    10
     2     1     1     1     1     9
     4     1     1     1     1     8
     6     1     1     1     1     7
     8     1     1     1     1     6
    10     1     1     1     1     5
    12     1     1     1     1     4
    14     1     1     1     1     3
    16     1     1     1     1     2
    18     1     1     1     1     1
     ⋮
```

Array 1 is created by horizontally concattenating the vector (0:2:20)' which increases by 2 down the column with the matrix ones(11,4) as well as the vector (10:-1:0)' which decreases by 1 down the column, starting at 10.

```
array2 = [(0:2:10);(0:2:20)',ones(11,4),(10:-1:0)';(20:-4:0)]
```

```
array2 = 13×6
     0     2     4     6     8    10
     0     1     1     1     1    10
     2     1     1     1     1     9
     4     1     1     1     1     8
     6     1     1     1     1     7
     8     1     1     1     1     6
    10     1     1     1     1     5
    12     1     1     1     1     4
    14     1     1     1     1     3
    16     1     1     1     1     2
     ⋮
```

Array 2 is created by using the same core as Array 1, but also vertically concattenating the vector (0:2:10) at the top, and the vector (20:-4:0) at the bottom.

```
x = [2 7 9 7;3 1 5 6;8 1 2 5];
y = x'
```

```
y = 4×3
     2     3     8
     7     1     1
     9     5     2
     7     6     5
```

y illustrates the 4x3 matrix x once it is transposed to become 3x4