

```

bb =
    3
    8
    1
>> C=[2 55 14 8; 21 5 32 11; 41 64 9 1]
C =
     2     55     14      8
    21      5     32     11
    41     64      9      1
>> D=C'
D =
     2     21     41
    55      5     64
    14     32      9
     8     11      1
>>

```

Define a matrix C with 3 rows and 4 columns.

Define a matrix D as the transpose of matrix C. (D has 4 rows and 3 columns.)

2.5 ARRAY ADDRESSING

Elements in an array (either vector or matrix) can be addressed individually or in subgroups. This is useful when there is a need to redefine only some of the elements, when specific elements are to be used in calculations, or when a subgroup of the elements is used to define a new variable.

2.5.1 Vector

The address of an element in a vector is its position in the row (or column). For a vector named *ve*, *ve(k)* refers to the element in position *k*. The first position is 1. For example, if the vector *ve* has nine elements:

```
ve = 35 46 78 23 5 14 81 3 55
```

then

```
ve(4) = 23, ve(7) = 81, and ve(1) = 35.
```

A single vector element, *v(k)*, can be used just as a variable. For example, it is possible to change the value of only one element of a vector by assigning a new value to a specific address. This is done by typing: *v(k) = value*. A single element can also be used as a variable in a mathematical expression. Examples are:

```

>> VCT=[35 46 78 23 5 14 81 3 55]
VCT =
    35    46    78    23     5    14    81     3    55
>> VCT(4)

```

Define a vector.

Display the fourth element.