

# Dimension Statement

## Description

Declares the name of a matrix, and allocates storage for it. A matrix must be dimensioned before it can be referenced in a program.

You can use **Dim** for Dimension.

## Syntax

**Dimension** *matrix*(row [,column]) [, *matrix*(row [,column]) ...]

- OR -

**Dim** *matrix*(row [,column]) [, *matrix*(row [,column]) ...]

## Parameters

The Dimension statement has the following parameters.

Parameter	Description
<i>matrix</i>	Any legal identifier. If more than one matrix is declared, the full declarations (name, row, and optional column) are delimited by commas.
<i>row</i>	An integer identifying the number of rows in matrix. Numbers resulting from expressions will be truncated to their integer value.
<i>column</i>	An integer identifying the number of columns in matrix. Numbers resulting from expressions will be truncated to their integer value. The row and <i>column</i> arguments must be separated by a comma.

The maximum number of elements in a matrix cannot be increased during the execution of a program. A one-dimensional matrix cannot be reassigned to be a two-dimensional matrix.

**Note:** *The Dimension statement only names the matrix and defines its dimensions; it does not assign values to the elements.*

## Zero-ith element

BASIC+ automatically allocates space for a 0 (zero) element when a matrix is dimensioned. That is, one more element is always available to receive data than is dimensioned in the Dimension statement. It is a single element, not a row or column. The data in the 0 (zero) element can be accessed by using a 0 (zero) subscript:

```
Matrix(0)
```

## See also

[Common](#), [Mat](#)

## Remarks

```
/* Two matrices are dimensioned. MONTH has 13 elements including a 0 (zero) element.
YEAR has 61 elements (12 rows by 5 columns, plus a 0 (zero) element). */
Dim MONTH(12), YEAR(12, 5)

/* The number of rows in matrix TESTB is the current value of X and the number of columns is the current value
of Y. */
Dim TESTB(X, Y)
/* Matrices named V, K, and R; each to contain 11 elements.
The additional element in each is the 0 (zero) element. */
Dim V(10), K(10), R(10)
```