**assert() — Abort execution if false**

**Syntax**

```plaintext
void assert(real scalar r)

void asserteq(transmorphic matrix A, transmorphic matrix B)
```

**Description**

`assert(r)` produces the error message “assertion is false” and aborts with error if `r == 0`.

`asserteq(A, B)` is logically equivalent to `assert(A==B)`. If the assertion is false, however, information is presented on the number of mismatches.

**Remarks and examples**

In the midst of complicated code, you know that a certain calculation must produce a result greater than 0, but you worry that perhaps you have an error in your code:

```plaintext
... assert(n>0) ...
```

In another spot, you have produced matrix A and know every element of A should be positive or zero:

```plaintext
... assert(A:>=0) ...
```

Once you are convinced that your function works, these verifications should be removed. In a third part of your code, however, the problem is different if the number of rows `r` exceed the number of columns `c`. In all the cases you need to use it, however, `r` will be less than `c`, so you are not much interested in programming the alternative solution:

```plaintext
... assert(rows(PROBLEM) < cols(PROBLEM)) ...
```

Leave that one in.
Conformability

assert(r):
   \[ r: \quad 1 \times 1 \]
   \[ result: \quad void \]

asserteq(A, B):
   \[ A: \quad r_1 \times c_1 \]
   \[ B: \quad r_2 \times c_2 \]
   \[ result: \quad void \]

Diagnostics

assert(r) aborts with error if \( r == 0 \).

asserteq(A, B) aborts with error if \( A \neq B \).

Also see

[M-4] programming — Programming functions