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Description

`all(`L`)` is equivalent to `sum(!`L`)==0` but is significantly faster.

`any(`L`)` is equivalent to `sum(`L`)!=0` but is slightly faster.

`allof(`P`, `s`)` returns 1 if every element of P equals s and returns 0 otherwise. `allof(`P`, `s`)` is faster and consumes less memory than the equivalent construction `all(`P`:==`s`)`.

`anyof(`P`, `s`)` returns 1 if any element of P equals s and returns 0 otherwise. `anyof(`P`, `s`)` is faster and consumes less memory than the equivalent `any(`P`:==`s`)`.

Syntax

real scalar `all(`*real matrix L*`)`

real scalar `any(`*real matrix L*`)`

real scalar `allof(`*transmorphic matrix P*`, `*transmorphic scalar s*`)`

real scalar `anyof(`*transmorphic matrix P*`, `*transmorphic scalar s*`)`

Remarks and examples

These functions are fast, so their use is encouraged over alternative constructions.

`all()` and `any()` are typically used with logical expressions to detect special cases, such as

```
if (any(x :< 0)) {
        ...
}
```

or

```
if (all(x :>= 0)) {
        ...
}
```

`allof()` and `anyof()` are used to look for special values:

```
if (allof(x, 0)) {
        ...
}
```

or

```
if (anyof(x, 0)) {
        ...
}
```

Do not use `allof()` and `anyof()` to check for missing values—for example, `anyof(x, .)`—because to really check, you would have to check not only `.` but also `.a`, `.b`, ..., `.z`. Instead use `missing()`; see [M-5] **missing( )**.

Conformability

`all(`*L*`)`, `any(`*L*`)`:

L:	$r \times c$
result:	1×1

`allof(`*P*`,` *s*`)`, `anyof(`*P*`,` *s*`)`:

P:	$r \times c$
s:	1×1
result:	1×1

Diagnostics

`all(`*L*`)` and `any(`*L*`)` treat missing values in *L* as true.

`all(`*L*`)` and `any(`*L*`)` return 0 (false) if *L* is $r \times 0$, $0 \times c$, or 0×0.

`allof(`*P*`,` *s*`)` and `anyof(`*P*`,` *s*`)` return 0 (false) if *P* is $r \times 0$, $0 \times c$, or 0×0.

Also see

[M-4] **Utility** — Matrix utility functions

For suggested citations, see the FAQ on citing Stata documentation.