
tally

syntax: `tally value list`

Note that there are no parentheses.

purpose: Tally is a convenience function that makes it easy to add a new value onto a list of values. The list must have been previously created with `list = starttally;`

```
example: res = starttally; % create the results list
for trials = 1:1000
    % number of heads in 100 coin flips
    a = count( sample(100,[0 1]) );
    % put the value of a onto the results list
    tally a res;
end
% Now res contains the 1000 values of a,
% one for each of the trials.
% We can do whatever we want with this
% such as seeing how many trials had
% more than 60 heads
count( res > 60 )
```

You can have as many tally lists as you like; they all operate independently.

You can empty a tally list by using `starttally`:

```
>> res = starttally;
```

In normal usage TALLY takes a single number (a scalar) to be added to the results list. However, TALLY can also take a row vector (for instance, from REGRESS). For any given results list, all of the items added to the list must have the same shape, that is all of them must be scalars, or all of them must be row vectors of the same size.

see also: STARTTALLY

for MATLAB experts:: TALLY is different from almost every other function in Resampling Stats in that TALLY alters the value of its argument. This behavior necessitates the unusual syntax of the command which does not involve parentheses.

Experienced MATLAB users are encouraged to use alternatives to tally. Two that are faster are shown below.

```

Ntrials = 1000;
res = zeros(Ntrials,1); % the 1 is very important
for trials = 1:Ntrials
    % a is the quantity we want to tally
    a = count( sample(100,[0 1]) );
    % and here is where the tallying actually takes place
    res(trials) = a;
end

```

The above assumes that you will tally exactly one value per trial. This may not always be true, for instance you may tally the result only if a certain condition is satisfied. In this case, the following is effective (although somewhat slower than the above):

```

Ntrials = 1000;
for trials = 1:Ntrials
    a = count( sample(10,[0 1]) );
    % tally only cases where there are more than 7 ones
    if a > 7 %
        res = [res; a];
    end
end
% Now res contains the results only for trials with a>7

```

In the original Resampling Stats software, the functionality of TALLY was provided by “score.”

This document is an excerpt from
Resampling Stats in MATLAB
 Daniel T. Kaplan
 Copyright (c) 1999 by Daniel T. Kaplan, All Rights Reserved
 This document differs from the published book in pagination and in the omission (unintentional, but unavoidable for technical reasons) of figures and cross-references from the book. It is provided as a courtesy to those who wish to examine the book, but not intended as a replacement for the published book, which is available from
 Resampling Stats, Inc.
www.resample.com
 703-522-2713