NAME

total - sum up columns

SYNOPSIS

total [−**m**][−**sE** | −**p** | −**u** | −**l**][−**tC**][−**N** [−**r**]] [file ..]

DESCRIPTION

Total sums up columns of real numbers from one or more files and prints out the result on its standard output.

By default, *total* computes the straigt sum of each input column, but multiplication can be specified instead with the −*p* option. Likewise, the −*u* option means find the upper limit (maximum), and −*l* means find the lower limit (minimum).

Sums of powers can be computed by giving an exponent with the −*s* option. (Note that there is no space between the −*s* and the exponent.) This exponent can be any real number, positive or negative. The absolute value of the input is always taken before the power is computed in order to avoid complex results. Thus, −*s1* will produce a sum of absolute values. The default power (zero) is interpreted as a straight sum without taking absolute values.

The −*m* option can be used to compute the mean rather than the total. For sums, the arithmetic mean is computed. For products, the geometric mean is computed. (A logarithmic sum of absolute values is used to avoid overflow, and zero values are silently ignored.)

A count can be given as the number of lines to read before computing a result. By default, *total* reads each file to its end before producing its result, but the −*N* option (where N is a decimal integer) tells *total* to produce a result and reset the calculation after every N input lines. In addition, the −*r* option can be specified to override reinitialization and thus give a running total every N lines. If the end of file is reached, the current total is printed and the calculation is reset before the next file (with or without the −*r* option).

The −*tC* option can be used to specify the input and output tab character. The default tab character is TAB.

If no files are given, the standard input is read.

EXAMPLE

To compute the RMS value of colon-separated columns in a file:

    total -t: -m -s2 input

To produce a running product of values from a file:

    total -p -1 -r input

BUGS

If the input files have varying numbers of columns, mean values will certainly be off. *Total* will ignore missing column entries if the tab separator is a non-white character, but cannot tell where a missing column should have been if the tab character is white.

AUTHOR

Greg Ward

SEE ALSO

cnt(1), lam(1), neat(1), rcalc(1), tabfunc(1)