NAME
mycalc − Invoke tcalc for arithmetic with times or bigfact or bc for arithmetic with numbers.

SYNOPSIS
${HOME}/bin/mycalc 13:17−5:42
${HOME}/bin/mycalc "fact(10)"
${HOME}/bin/mycalc "3*(sqrt(5ˆ3)+1)"

DESCRIPTION
If the script is invoked with no arguments it prints usage information and stops with return code 255. Otherwise it searches its argument string for a colon. If a colon is found it invokes tcalc on the argument string to do a time calculation and stops with the return code from tcalc. If a colon is not found it searches its argument string for "fact(N)", extracts N, invokes bigfact to compute the factorial of N, and stops with the return code from bigfact. If neither a colon nor "fact" is found, the script invokes bc −l on the argument string to do a numerical calculation and stops with the return code from bc. The script replaces the elementary function names sin, cos, atan, ln, exp, and bessj by the names that bc uses, and replaces the names pi and e by their numerical values. If the elementary function name tan is used, the script defines tan(x) as the appropriate bc expression. The script removes extra trailing zeros in the fractional part of a numerical result.

OPTIONS
Exactly one of tcalc, bigfact, or bc can be used in a single invocation of this script; which one is used depends on whether the argument string does or does not contain a colon or the string "fact(N)".

UNIT
standard-out   result

DIAGNOSTICS
The script exits with the return code from tcalc or bigfact or bc, or with $?=5 if usage information is printed.

BUGS
The /usr/bin/bc program is remarkable for its ability to do arbitrary-precision arithmetic, but it is otherwise limited in various ways. For example, the power in an exponentiation must be an integer, only a few mathematical functions are built-in, and no way is provided to invoke a user-supplied external function.

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EXAMPLE
```
unix[1] mycalc 08:13-23:45 + 12:14
-0:198=-3:18 or 20:42 yesterday
unix[2] mycalc "fact(10)"
 3628800
unix[3] mycalc "tan(pi/3)"
1.73205080756887729352
unix[4]
```