test *EXPRESSION*

[ *EXPRESSION* ]

**Expressions**

Expressions take the following forms:

|  |  |
| --- | --- |
| **(** *EXPRESSION* **)** | *EXPRESSION* is true |
| **!** *EXPRESSION* | *EXPRESSION* is false |
| *EXPRESSION1* **-a** *EXPRESSION2* | both *EXPRESSION1* and *EXPRESSION2* are true |
| *EXPRESSION1* **-o** *EXPRESSION2* | either *EXPRESSION1* or *EXPRESSION2* is true |
| **-n** [*STRING*](https://www.computerhope.com/jargon/s/string.htm) | the length of *STRING* is nonzero |
| *STRING* | equivalent to **-n** *STRING* |
| **-z** *STRING* | the length of *STRING* is zero |
| *STRING1* **=** *STRING2* | the strings are equal |
| *STRING1* **!=** *STRING2* | the strings are not equal |
| *INTEGER1* **-eq** *INTEGER2* | *INTEGER1* is equal to *INTEGER2* |
| *INTEGER1* **-ge** *INTEGER2* | *INTEGER1* is greater than or equal to *INTEGER2* |
| *INTEGER1* **-gt** *INTEGER2* | *INTEGER1* is greater than *INTEGER2* |
| *INTEGER1* **-le** *INTEGER2* | *INTEGER1* is less than or equal to *INTEGER2* |
| *INTEGER1* **-lt** *INTEGER2* | *INTEGER1* is less than *INTEGER2* |
| *INTEGER1* **-ne** *INTEGER2* | *INTEGER1* is not equal to *INTEGER2* |
| *FILE1* **-ef** *FILE2* | *FILE1* and *FILE2* have the same device and [inode](https://www.computerhope.com/jargon/i/inode.htm) numbers |
| *FILE1* **-nt** *FILE2* | *FILE1* is newer (modification date) than *FILE2* |
| *FILE1* **-ot** *FILE2* | *FILE1* is older than *FILE2* |
| **-b** *FILE* | *FILE* exists and is [block](https://www.computerhope.com/jargon/b/block.htm) special |
| **-c** *FILE* | *FILE* exists and is [character](https://www.computerhope.com/jargon/c/charact.htm) special |
| **-d** *FILE* | *FILE* exists and is a [directory](https://www.computerhope.com/jargon/d/director.htm) |
| **-e** *FILE* | *FILE* exists |
| **-f** *FILE* | *FILE* exists and is a regular file |
| **-g** *FILE* | *FILE* exists and is set-group-ID |
| **-G** *FILE* | *FILE* exists and is owned by the effective group ID |
| **-h** *FILE* | *FILE* exists and is a [symbolic link](https://www.computerhope.com/jargon/s/symblink.htm) (same as **-L**) |
| **-k** *FILE* | *FILE* exists and has its sticky bit set |
| **-L** *FILE* | *FILE* exists and is a symbolic link (same as **-h**) |
| **-O** *FILE* | *FILE* exists and is owned by the effective user ID |
| **-p** *FILE* | *FILE* exists and is a named pipe |
| **-r** *FILE* | *FILE* exists and read [permission](https://www.computerhope.com/jargon/p/permissi.htm) is granted |
| **-s** *FILE* | *FILE* exists and has a size greater than zero |
| **-S** *FILE* | *FILE* exists and is a socket |
| **-t** *FD* | file descriptor *FD* is opened on a terminal |
| **-u** *FILE* | *FILE* exists and its set-user-ID bit is set |
| **-w** *FILE* | *FILE* exists and write permission is granted |
| **-x** *FILE* | *FILE* exists and execute (or search) permission is granted |

Except for **-h** and **-L**, all *FILE-related* tests dereference symbolic links. Beware that parentheses need to be escaped (e.g., by backslashes) for shells. **INTEGER** may also be **-l STRING**, which evaluate