

*Returns* A nonzero value if *c* is a printing character (including a space) and zero otherwise. 23.5

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**ispunct** *Test for Punctuation Character* <ctype.h>

`int ispunct(int c);`

*Returns* A nonzero value if *c* is a punctuation character and zero otherwise. All printing characters except the space (' ') and the alphanumeric characters are considered punctuation. *C99 change:* In the "C" locale, all printing characters except those for which `isspace` or `isalnum` is true are considered punctuation. 23.5

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**isspace** *Test for White-Space Character* <ctype.h>

`int isspace(int c);`

*Returns* A nonzero value if *c* is a white-space character and zero otherwise. In the "C" locale, the white-space characters are space (' '), form feed ('\f'), new-line ('\n'), carriage return ('\r'), horizontal tab ('\t'), and vertical tab ('\v'). 23.5

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**isunordered** *Test for Unordered (C99)* <math.h>

`int isunordered(real-floating x, real-floating y);` *macro*

*Returns* 1 if *x* and *y* are unordered (at least one is a NaN) and 0 otherwise. 23.4

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**isupper** *Test for Upper-Case Letter* <ctype.h>

`int isupper(int c);`

*Returns* A nonzero value if *c* is an upper-case letter and zero otherwise. 23.5

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**iswalnum** *Test for Alphanumeric Wide Character (C99)* <wctype.h>

`int iswalnum(wint_t wc);`

*Returns* A nonzero value if *wc* is alphanumeric and zero otherwise. (*wc* is alphanumeric if either `iswalpha(wc)` or `iswdigit(wc)` is true.) 25.6

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**iswalpha** *Test for Alphabetic Wide Character (C99)* <wctype.h>

`int iswalpha(wint_t wc);`

*Returns* A nonzero value if *wc* is alphabetic and zero otherwise. (*wc* is alphabetic if `iswupper(wc)` or `iswlower(wc)` is true, or if *wc* is one of a locale-specific set of alphabetic wide characters for which none of `iswcntrl`, `iswdigit`, `iswpunct`, or `iswspace` is true.) 25.6

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**iswblank** *Test for Blank Wide Character (C99)* <wctype.h>

`int iswblank(wint_t wc);`

*Returns* A nonzero value if *wc* is a standard blank wide character or one of a locale-specific set of wide characters for which `iswspace` is true and that are used to separate words within a line of text. In the "C" locale, `iswblank` returns true only for the standard blank characters: space (L' ') and horizontal tab (L' '\t'). 25.6