NAME

tanpi, **tanpif**, **tanpil** - half-cycle tangent functions

LIBRARY

Math Library (libm, -lm)

SYNOPSIS

#include <math.h>

double
tanpi(*double x*);

float
tanpif(*float x*);

long double
tanpil(*long double x*);

DESCRIPTION

The **tanpi**(), **tanpif**(), and **tanpil**() functions compute the tangent of <*pi*> *x x* and measure angles in half-cycles.

RETURN VALUES

The **tanpi**(), **tanpif**(), and **tanpil**() functions returns **tan**(<*pi*> *x x*). If |x| >= 2^(p - 1) where p is the floating-point precision of *x*, then the returned value is +-0 and it has no significance.

SPECIAL VALUES

tanpi(+-*0*) returns +-0.

tanpi(+-*n*) returns +-0 for positive integers *n*.

tanpi(+-*n/2*) returns NaN for n > 0 and raises an FE_INVALID exception.

tanpi(+-<*infinity*>) return an NaN and raises an FE_INVALID exception.

tanpi(*NaN*) return an NaN and raises an FE_INVALID exception.

SEE ALSO

cos(3), cospi(3), fenv(3), math(3), sin(3), sinpi(3), tan(3)

AUTHORS

The half-cycle trignometric functions were written by Steven G. Kargl <*kargl@FreeBSD.org*>.

STANDARDS

These functions conform to IEEE Std 754tm-2008 , "IEEE Standard for Floating-Point Arithmetic" and to ISO/IEC TS 18661-4 , "Information technology -- Programming languages, their environments, and system software interfaces -- Floating-point extensions for C" -- Part 4: Supplementary functions.