NAME
sinpi, **sinpif**, **sinpil** - half-cycle sine functions

LIBRARY
Math Library (libm, -lm)

SYNOPSIS
#include <math.h>

double
sinpi(*double x*);

float
sinpif(*float x*);

long double
sinpil(*long double x*);

DESCRIPTION
The **sinpi**(), **sinpif**(), and **sinpil**() functions compute the sine of *<pi> x x.* and measure angles in half-cycles.

RETURN VALUES
The **sinpi**(), **sinpif**(), and **sinpil**() functions returns **sin**(*<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
sinpi(*+-0*) returns +-0.

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

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

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

SEE ALSO
cos(3), cospi(3), fenv(3), math(3), sin(3), tan(3), tanpi(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.