def: $f(x) \perp g(x) \equiv f(x)$ is orthogonal to $g(x) \equiv$

$$\langle f(x), g(x) \rangle \equiv \int_D f(x) g(x) \, dx = 0$$

where D is domain of x

not'n: $\langle f(x), g(x) \rangle$ means "inner product"

def: $f(x) \perp g(x)$ with respect to weighting function

$w(x) \equiv \quad \langle f(x), g(x) \rangle \equiv \int_D f(x) g(x) w(x) = 0$

ref: [1] Weisstein, Eric W. "Orthogonal Functions."
From MathWorld--A Wolfram Web Resource.
http://mathworld.wolfram.com/orthogonalFunctions.html