

Problem 3-3

$F_0 =$ Avg value, $F_h =$ rms value

(a) $F_0 = 0$, $F_h = \frac{1}{\sqrt{2}} \frac{4}{\pi h} A$ $h = 1, 3, 5, \dots$ (odd)

(b) $F_0 = 0$ $F_h = \frac{4A}{\sqrt{2}\pi h} \cos(h\frac{u}{2})$ $h = 1, 3, 5, \dots$ (odd)

(c) $F_0 = 0$ $F_h = \frac{2A(2\pi)}{\sqrt{2}\pi^2 \frac{u}{2} h^2} \sin(h\frac{u}{2})$ $h = 1, 3, 5, \dots$ (odd)

(d) $F_0 = 0$ $F_h = \frac{2A(2\pi)}{\sqrt{2}u_2\pi^2 h^2} [\sin h(u_1+u_2) - \sin h u_1]$ $h = 1, 3, 5, \dots$ odd

(e) $F_0 = 0$ $F_h = \frac{8}{\sqrt{2}\pi^2} \frac{A}{h^2}$ $h = 1, 3, 5, \dots$ odd

(f) $F_0 = \frac{2A}{\pi}$, $F_h = \frac{4A}{\sqrt{2}\pi(h^2-1)}$ $h = 2, 4, 6, \dots$ even

(g) $F_0 = DA$, $F_h = \frac{2A}{\sqrt{2}h\pi} \sin(Dh\pi)$ $h = 1, 2, 3, \dots$