

$$V = \pi R^2 h = xy^2 z = (3/142)(0/667)^2 (1/833) = 2/562$$

$$x = \pi = 3/142, e_x \leq 0/0005, y = R = \frac{2}{3} = 0/667, e_y \leq 0/0005, z = \frac{11}{6} = 1/833, e_z \leq 0/0005$$

$$e_v = e_x (y^2 z) + e_y (2xyz) + e_z (xy^2)$$

$$e_v \leq (0/0005)[(0/667)^2 (1/833) + 2(3/142)(0/667)(1/833) + (3/142)(0/667)^2]$$

$$e_v \leq 0/00495 \rightarrow e'_v \leq 0/00495 + 0/0005 \rightarrow e'_v \leq 0/00545 < 0/05$$

دقت تقریب حجم برابر است با یک رقم اعشار

$$f(x) = \sin(x) \sinh(x) + 1 \rightarrow f'(x) = \cos(x) \sinh(x) + \sin(x) \cosh(x)$$

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)} = x_n - \frac{\sin(x) \sinh(x) + 1}{\cos(x) \sinh(x) + \sin(x) \cosh(x)}, x_0 = 7 \rightarrow x_1 = 6/5331 \rightarrow$$

$$x_2 = 6/3274 \rightarrow x_3 = 6/2816 \rightarrow x_4 = 6/2794 \rightarrow x_5 = 6/2794$$