

Exercise 7

In Exercises 6 through 11, use the formal method, involving an infinite series of residues and illustrated in Examples 2 and 3 in Sec. 89, to find the function $f(t)$ that corresponds to the given function $F(s)$.

$$F(s) = \frac{1}{s \cosh s^{1/2}}.$$

$$\text{Ans. } f(t) = 1 + \frac{4}{\pi} \sum_{n=1}^{\infty} \frac{(-1)^n}{2n-1} \exp \left[-\frac{(2n-1)^2 \pi^2 t}{4} \right].$$