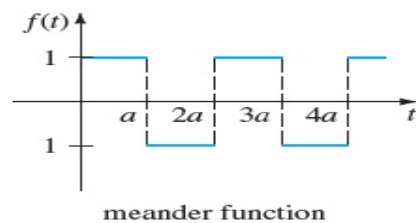


DIRECTIONS

Provide complete legible solutions to the following problems in the space provided. Be sure to supply all the details that support your solutions

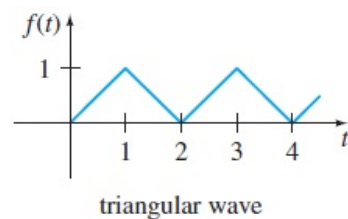
1. Use Theorem 7.4.3 to find the Laplace transform $F(s)$ of the given periodic function f in the graph.

Ans _____



2. Use Theorem 7.4.3 to find the Laplace transform $F(s)$ of the given periodic function f in the graph.

Ans _____



3. Solve the model for a driven spring/mass system with damping

$$m \frac{d^2x}{dt^2} + \beta \frac{dx}{dt} + kx = f(t), \quad x(0) = 0, \quad x'(0) = 0,$$

and the driving function f is the meander function given below with
where

$m = \frac{1}{2}$, $\beta = 1$, $k = 5$, and the driving function f is the meander function given below with
amplitude 40, and $a = \pi$.

