

## **Example 9-4: Squaring is Time-Invariant**

Consider the squaring system given by (9.27). When the input is x(t), the output is  $y(t) = [x(t)]^2$ . Now if the input is  $x(t - t_0)$ , the corresponding output will be  $w(t) = [x(t - t_0)]^2$ . Therefore, we see that  $w(t) = y(t - t_0)$ , so the system is time-invariant.

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