TTTT., up all y a source and the second seco **EXERCISE 9.8:** Suppose that  $x(t) \neq 0$  only for  $T_1 \leq t \leq T_2$  and  $h(t) \neq 0$  only for  $T_3 \leq t \leq T_4$ . Draw a sketch of  $x(\tau)$  with  $h(t-\tau)$  for several values of t as in Fig. 9-14(a) for "typical" finite-duration functions x(t) and h(t). Use this figure to show that y(t) = x(t) \* h(t) also has finite duration given by  $y(t) \neq 0$  for  $T_5 \leq t \leq T_6$ . Find  $T_5$  and  $T_6$ in terms of  $T_1$ ,  $T_2$ ,  $T_3$ , and  $T_4$ .

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