EXERCISE 5.2: Compute the output y[n] for the length-4 filter whose coefficients are $\{b_k\} = \{3, -1, 2, 1\}$. Use the input signal given in Fig. 5-2(a). Verify that the partial answer tabulated here is correct, then fill in the missing values.

n	<i>n</i> < 0	0	1	2	3	4	5	6	7	8	<i>n</i> > 8
x[n]	0	2	4	6	4	2	0	0	0	0	0
<i>y</i> [<i>n</i>]	0	6	10	18	?	?	?	8	2	0	0

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