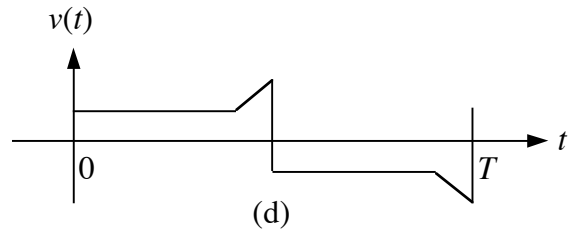
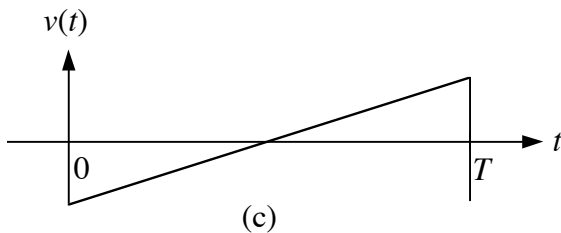
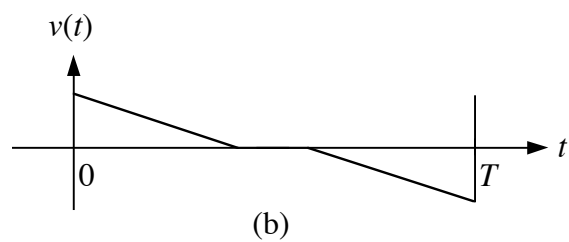
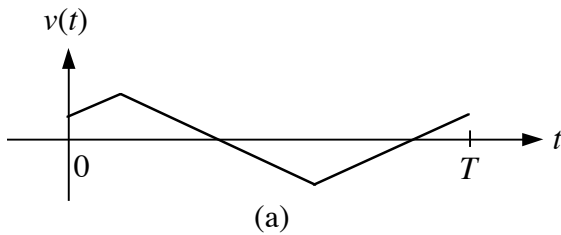


**EX:** Fill in the following table with check marks for the functions shown below.

|   | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| The function is odd                             |     |     |     |     |
| The function is even                            |     |     |     |     |
| The function has shift-flip symmetry            |     |     |     |     |
| $a_v = 0$ (DC offset)                           |     |     |     |     |
| All the $a_k$ are zero (not including $a_v$ )   |     |     |     |     |
| All $b_k$ are zero for even-numbered subscripts |     |     |     |     |



**ANS:**

|   | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| The function is odd                             |     | ✓   | ✓   |     |
| The function is even                            |     |     |     |     |
| The function has shift-flip symmetry            | ✓   |     |     | ✓   |
| $a_v = 0$ (DC offset)                           | ✓   | ✓   | ✓   | ✓   |
| All the $a_k$ are zero (not including $a_v$ )   |     | ✓   | ✓   |     |
| All $b_k$ are zero for even-numbered subscripts | ✓   |     |     | ✓   |