Our Notation for Turing-Machine Tapes

e	the empty tape (i.e., the tape with no squares on it)
0110	a 4-square tape with: '0' on square 1, '1' on square 2, '1' on square 3, '0' on square 4
01$\underline{1}$0	that same 4-square tape, scanning s_3
s_1	the first square
s_{17}	the 17th square
s_k	the kth square
s_{k-1}	the square just before s_k (i.e., the square to the left of s_k)
s_{k+1}	the square just after s_k (i.e., the square to the right of s_k)
s_1, s_2, s_3, s_4	a tape with 4 squares
$s_1, s_2, \ldots, s_{17}$	a tape with 17 squares
$s_1, s_2, \ldots, s_k$	a tape with k squares
$s_1, s_2, \underline{s_3}, s_4$	a tape with 4 squares, scanning the 3rd square
$s_1, s_2, \ldots, \underline{s_i} \ldots, s_k$	a tape with k squares, scanning the ith square
$s_1, s_2, \ldots, s_{i-1}, \underline{s_i}, s_{i+1}, \ldots, s_k$	that same k-square tape, showing the two squares before and after the scanned square