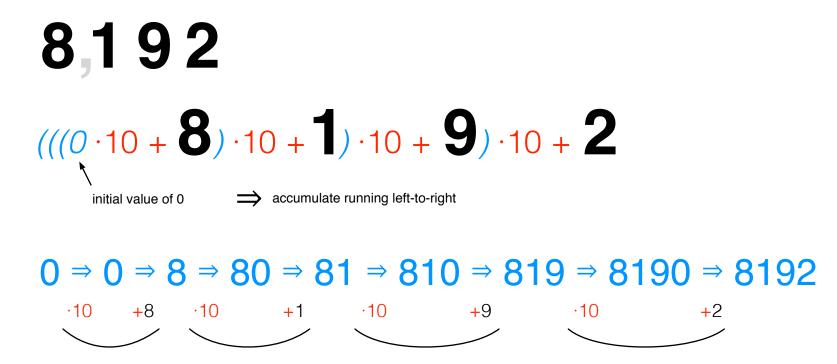
Using Horner's technique to evaluate a numeral (string of digits) into a number

Consider the (base-10, or *decimal*) numeral: 8,192



Each digit d_i is "replaced by" (or "interpreted as") the operation: "multiply by 10 and add d_i " (more generally and more accurately: "multiply by the *base* and add the *value of* the digit d_i ")

These operations are then applied, starting with 0 as the initial value, from left to right. (Of course, since 0.10 = 0, and $0+d_0 = d_0$, you can also just start with initial value = d_0 and save two operations.)