32   A number can be written as a sequence of decimal digits. Consider using the sequence notation with arbitrary expressions, not just digits. For example, $1(2+3)4 = 154$. What changes are needed to the number axioms?

After trying the question, scroll down to the solution.

§   I think the only thing necessary is to change

$$d0+1 = d1$$
$$d1+1 = d2$$

and so on, where d is a sequence of digits, into

$$x0+1 = x1$$
$$x1+1 = x2$$

and so on, where x is any number (expression). The question is unclear about how blank spaces are treated, and my answer is equally unclear. We can decide to allow blank spaces between number subexpressions that are part of the same number expression; for example, 2 143 569 is a single number expression. Or we can decide that blanks are not allowed.