Properly Typesetting Combined Superscripts and Subscripts

In many cases, it may be necessary to include both superscripts and subscripts on a single variable. Unfortunately, this may be difficult to accomplish without using the built-in equation editor. However, there is a very nice solution that will allow us to even include an additional layer of subscripts on the letters. The steps to implement this are:

1. Type all characters in the order of "variable-superscript-subscript", for example, `xnew k`. A space is how Word decides how to split the text. If it is desired to include a space in one of the components, then the desired spaces can be replaced by nonbreaking spaces (U+00A0) rather than the normal space (U+0020).

2. Select both the superscript and subscript part, that is, select `new k`.

3. Go to the `Home` ribbon. Find the `Paragraph` tab, and go to the `Asian Layout` dropdown menu and select `Two lines in one`. This is shown in Figure 1.[1]
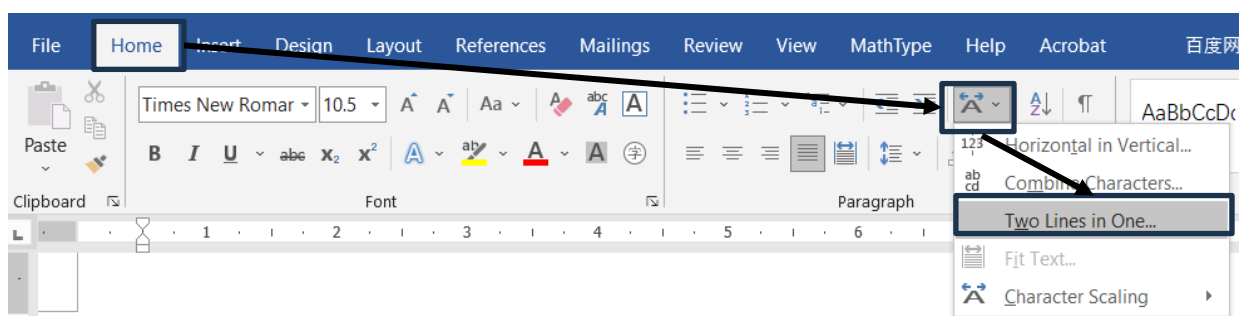

Figure 1: Finding the "Two Lines in One…" Option

4. As shown in Figure 2, a new window will appear. Make sure that there is a space between the `new` and the `k`.

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[1] If this option is not available, then the easiest solution is to simply install the Chinese language pack for Windows and then Word will automatically install all the Asian layout features, many of which are useful for scientific typesetting.
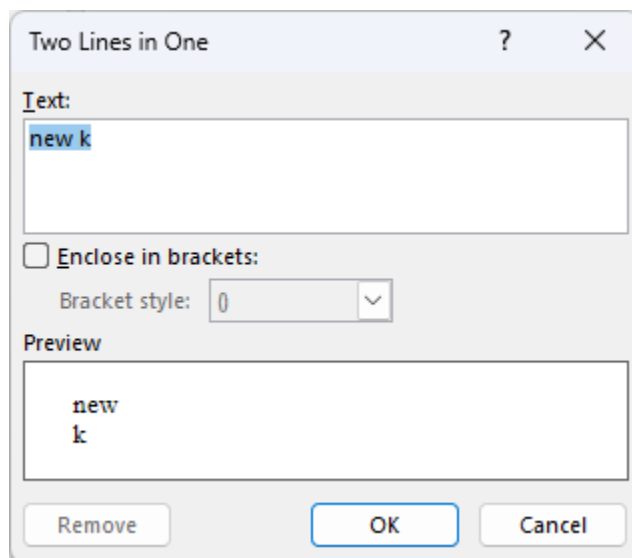
Figure 2: (left) Window that Appears

5. Press $\texttt{OK}$ and the desired combined form appears. It may be necessary to change the font and formatting in order to make everything clearer.

6. If it is desired to include an additional layer of a subscript or superscript, then this can be now accomplished by simply selecting the desired text in the combined form and formatting it as a superscript or subscript.

A more complex example using the above procedure would be:

$$xb1\ c\ d2 \rightarrow x_{c\ d^2}^{b_1}$$

Note that the second space in the original text was created using a nonbreaking space so that it will appear.

*Hat Tip: Niannian Zheng (*郑年年*)*