

calc_decimal_example

Student Group

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\$I.\quad\$ Calculation example for decimal value

Idea: The number \$2658.47\$ is only the representation with the numerals \$[0..9]\$, but what is the value behind it?

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\begin{align*} \begin{smallmatrix} \color{black}{\text{number}:} & \color{black}{} & \\ \color{black}{2} & \color{black}{6} & \color{black}{5} & \color{black}{8.} & \color{black}{4} & \\ \color{black}{7} & \color{white}{\text{index}:} & \color{white}{i} & \color{white}{3} & \\ \color{white}{2} & \color{white}{1} & \color{white}{0} & \color{white}{-1} & \color{white}{-2} & \\ \color{white}{\text{place value}:} & \color{white}{B^i} & \color{white}{10^3} & \\ \color{white}{10^2} & \color{white}{10^1} & \color{white}{10^0} & \color{white}{10^{-1}} & \\ \color{white}{10^{-2}} & \color{white}{} & \color{white}{} & \color{white}{1000} & \\ \color{white}{100} & \color{white}{10} & \color{white}{1} & \color{white}{0.1} & \\ \color{white}{0.01} & \color{white}{\text{numerals}:} & \color{white}{z_i} & \color{white}{2} & \\ \color{white}{6} & \color{white}{5} & \color{white}{8} & \color{white}{4} & \color{white}{7} & \\ \color{white}{\text{calc}.:} & \color{white}{z_i \cdot B^i} & \color{white}{2000} & \\ \color{white}{600} & \color{white}{50} & \color{white}{8} & \color{white}{0.4} & \\ \color{white}{0.07} & \color{white}{\text{result}:} & \color{white}{\sum_i z_i \cdot B^i} & & \\ \color{white}{2658.47} & \end{smallmatrix} \end{align*}
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First: But space between the numerals to see the thousands, hundreds, tens, ones, tenths, hundredths

```
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Last update: **2021/09/15 02:46**

