

calc_decimal_example

Student Group

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$\$I.\text{quad}$ Calculation example for decimal value

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\begin{align*} \begin{smallmatrix} \color{blue}{\text{value}}: & \color{blue}{\{ \} } & \color{blue}{\{2\}} \\ & \color{blue}{\{6\}} & \color{blue}{\{5\}} & \color{blue}{\{8\}} & \color{blue}{\{4\}} & \color{blue}{\{7\}} \\ \color{blue}{\text{index}}: & \color{blue}{\{i\}} & \color{blue}{\{3\}} & \color{blue}{\{2\}} & \color{blue}{\{1\}} & \color{blue}{\{0\}} & \color{blue}{\{-1\}} & \color{blue}{\{-2\}} \\ \color{blue}{\text{place value}}: & \color{blue}{\{B^i\}} & \color{blue}{\{10^3\}} & \color{blue}{\{10^2\}} \\ & \color{blue}{\{10^1\}} & \color{blue}{\{10^0\}} & \color{blue}{\{10^{-1}\}} & \color{blue}{\{10^{-2}\}} \\ \color{blue}{\{ \} } & \color{blue}{\{ \} } & \color{blue}{\{1000\}} & \color{blue}{\{100\}} & \color{blue}{\{10\}} & \color{blue}{\{1\}} & \color{blue}{\{0.1\}} & \color{blue}{\{0.01\}} \\ \color{blue}{\text{digit}}: & \color{blue}{\{z_i\}} & \color{blue}{\{2\}} & \color{blue}{\{6\}} & \color{blue}{\{5\}} & \color{blue}{\{8\}} & \color{blue}{\{4\}} & \color{blue}{\{7\}} \\ \color{blue}{\text{calc.}}: & \color{blue}{\{z_i \cdot B^i\}} & \color{blue}{\{2000\}} & \color{blue}{\{600\}} & \color{blue}{\{50\}} & \color{blue}{\{8\}} & \color{blue}{\{0.4\}} & \color{blue}{\{0.07\}} \\ \color{blue}{\text{result}}: & \color{blue}{\{\sum_i z_i \cdot B^i\}} & \color{blue}{\{2658.47\}} \end{smallmatrix} \end{align*}
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\begin{align*} \text{value} & \& \& 2 \& \& 6 \& \& 5 \& \& 8 , \& \& 4 \& \& 7 \\ \text{index} & \& i \& \& 3 \& \& 2 \& \& 1 \& \& 0 \& \& -1 \\ & \& -2 \\ \text{place value} & \& B^i \& \& 10^3 \& \& 10^2 \& \& 10^1 \& \& 10^0 \& \& 10^{-1} \& \& 10^{-2} \\ \text{digit} & \& z_i \\ \text{calc.} & \& z_i \cdot B^i \\ \text{Result} & \& \sum_i z_i \cdot B^i \\ & \& 2658,47 \end{align*}
```

value		2	6	5	8 ,	4	7	
index	i	3	2	1	0	-1	-2	
place value	B^i	$\text{\small{10}^3}$	$\text{\small{10}^2}$	$\text{\small{10}^1}$	$\text{\small{10}^0}$	$\text{\small{10}^{-1}}$	$\text{\small{10}^{-2}}$	
		$\text{\small{1000}}$	$\text{\small{100}}$	$\text{\small{10}}$	$\text{\small{1}}$	$\text{\small{0.10}}$	$\text{\small{0.01}}$	
digit	z_i	2	6	5	8	4	7	
calc.	$z_i \cdot B^i$	2000	600	50	8	0.4	0.07	
Result	$\sum_i z_i \cdot B^i$	2658,47						
value		2	6	5	8 ,	4	7	
index	i	3	2	1	0	-1	-2	
$\text{\small{10}^3}$								
$\text{\small{10}^2}$								
$\text{\small{10}^1}$								
$\text{\small{10}^0}$								
$\text{\small{10}^{-1}}$								
$\text{\small{10}^{-2}}$								
$\text{\small{1000}}$								
$\text{\small{100}}$								
$\text{\small{10}}$								
$\text{\small{1}}$								
$\text{\small{0.10}}$								
$\text{\small{0.01}}$								
digit	z_i	2	6	5	8	4	7	
calc.	$z_i \cdot B^i$	2000	600	50	8	0.4	0.07	
Result	$\sum_i z_i \cdot B^i$	2658,47						
aus (2+3)	$\text{\small{10}^3} = \text{\small{10}^2} = 0$				$\text{\small{10}^0}$ und $\text{\small{10}^{-1}}$ sind damit definiert			
$\text{\small{10}^3}$	$\text{\small{10}^3} = \text{\small{10}^2} = 0$				$\text{\small{10}^0}$ und $\text{\small{10}^{-1}}$ sind damit definiert			
aus (6)	$\text{\small{10}^3} = \text{\small{10}^2} = 0$				$\text{\small{10}^0}$ ist damit bekannt, wenn $\text{\small{10}^1}$ bekannt ist			
$\text{\small{10}^3}$	$\text{\small{10}^3} = \text{\small{10}^2} = 0$				$\text{\small{10}^0}$ ist damit bekannt, wenn $\text{\small{10}^1}$ bekannt ist			

[illegible]

\$II.\quad\$ Betrachtung der Spannungsverstärkung

[illegible]

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