

# calc\_decimal\_example

## Student Group

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## Table of Contents

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### §I. Calculation example for decimal value

value	2	6	5	8	4	7
index	$i$	3	2	1	0	-1
place value	$B^i$	$\{10^3\}$	$\{10^2\}$	$\{10^1\}$	$\{10^0\}$	$\{10^{-1}\}$
digit	$z_i$	2	6	5	8	4
calc.	$\sum z_i B^i$	2000	600	50	8	0.4
Result	$\sum z_i B^i$	2658,47				

### §II. Betrachtung der Spannungsverstärkung

aus (0)	$A_V = \frac{U_A}{U_E}$	
	$A_V = \frac{U_A}{U_E} = \frac{U_A}{U_2 + U_D}$	mit (4): $U_E = U_2 + U_D$
	$A_V = \frac{U_A}{U_2 + U_D}$	
	$A_V = \frac{U_A}{U_2 + U_D}$	
	$A_V = \frac{U_A}{U_2 + U_D}$	mit (10): $U_2 = U_A \cdot \frac{R_2}{R_1 + R_2}$
	$A_V = \frac{U_A}{U_A \cdot \frac{R_2}{R_1 + R_2} + U_D}$	
	$A_V = \frac{U_A}{U_A \cdot \frac{R_2}{R_1 + R_2} + U_D}$	
	$A_V = \frac{U_A}{U_A \cdot \frac{R_2}{R_1 + R_2} + U_D}$	mit (1)
	$A_V = \frac{U_A}{U_A \cdot \frac{R_2}{R_1 + R_2} + U_D}$	
	$A_V = \frac{U_A}{U_A \cdot \frac{R_2}{R_1 + R_2} + U_D}$	
	$A_V = \frac{U_A}{U_A \cdot \frac{R_2}{R_1 + R_2} + U_D}$	Erweitern mit $\frac{1}{U_A}$
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	mit $\frac{1}{U_A} \cdot \frac{R_1 + R_2}{R_1 + R_2}$
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	Bruch umformen
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	
	$A_V = \frac{1}{\frac{R_2}{R_1 + R_2} + \frac{U_D}{U_A}}$	

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