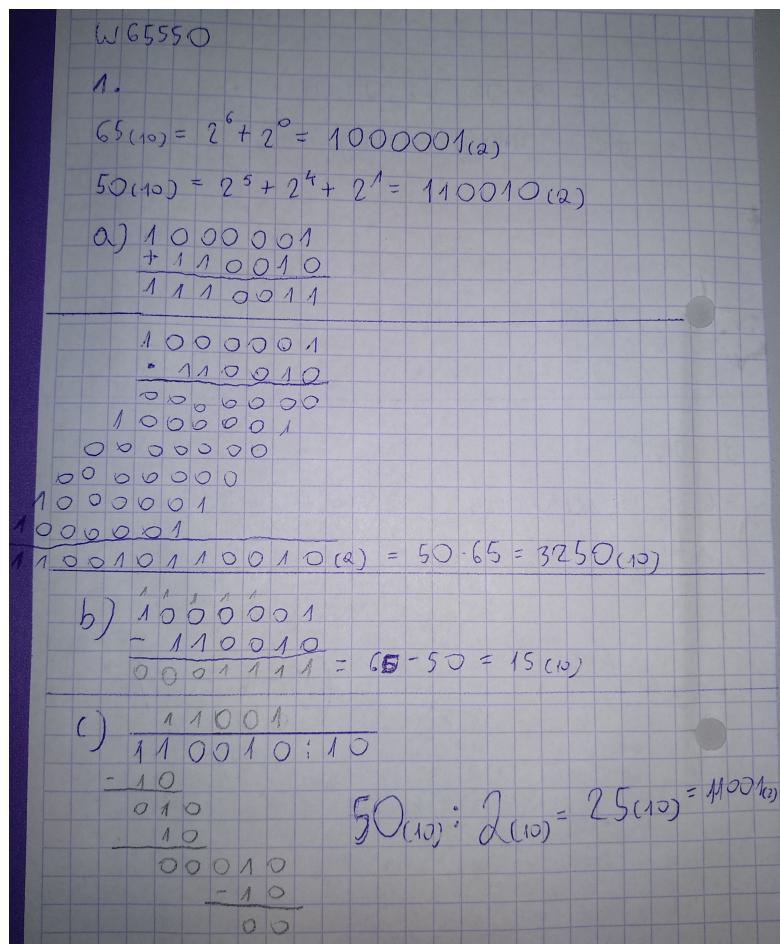


# GL02, Lab 4

w65550 - IID - Piotr Najda

16 listopada 2021

## 1 Zadania 1-4



Rysunek 1: Zadanie 1

2.

$$55560 = 5:06 \quad 5:10:06$$

godziny	minuty	sekundy
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/> 05:10:06 <hr/>		

3. 5, 6

$$- 6_{(10)} = 1010_{(12)} \quad 5_{(10)} = 0101_{(12)}$$

$$\begin{array}{r} 0110_{(2)} \\ + 1001 \\ \hline 1010_{(2)} \end{array}$$

$$\begin{array}{r} 1010 \\ + 0101 \\ \hline 1111_{(2)} \end{array} \quad \begin{array}{r} 0101 \\ - 0110 \\ \hline 1111 \end{array} \quad (5 - 6 = -1)$$

$$\begin{array}{r} 11111010 \\ - 0000101 \\ \hline 11111010 \\ 00000000 \\ + 11111010 \\ \hline 11100010 = -30_{(10)} \end{array}$$

Rysunek 2: Zadania 2-3

4.

$$12_{(10)} = 1100_{(2)} = \cancel{1}000000\ 00001100_{(2)}$$

$$-4_{(10)} = \cancel{1}1111100_{(2)}$$

$$\begin{array}{r} 0100_{(2)} = 00000100 + 1 \\ \text{NOT} \\ \hline 11111011 \\ \hline 11111100_{(2)} \end{array}$$

Zamiana na dekadnicę

$$-4 = \text{NOT } 1111100_{(2)} + 1 = 00000011 \\ + 1 \\ \hline 00000100_{(2)}$$

$$\begin{array}{r} 00000011 \\ 00001100 : 00000100 \\ - 100 \\ \hline 0100 \\ - 100 \\ \hline 0000 \end{array}$$

$$\text{NOT } 00000011 + 1 = \cancel{1}1111100 \\ \hline 11111101$$

Wynik:  $11111101_{(2)} = -3_{(10)}$

W65550

Rysunek 3: Zadanie 4