

Aufgabe 3.1

(a)

$$\begin{aligned} & 5385_{10} - 732_{10} \\ &= K(K_5 385 + 732) \\ &= K(10000 - 5385 + 732) \\ &= K(4615 + 732) \\ &= K_5 347 \\ &= 10000 - 5347 \\ &= 4653 \end{aligned}$$

(b)

$$\begin{aligned} & 732_{10} - 867_{10} \\ &= K(K_7 32 + 867) \\ &= K(1000 - 732 + 867) \\ &= K(268 + 867) \\ &= K_1 135 \\ &= 1000 - 1135 \\ &= -135 \end{aligned}$$

Aufgabe 3.2

(a)

$$\begin{aligned} & (47,252|3)_{10} \\ &= 47,252 * 10^3 \\ &= 4,7252 * 10^4 \end{aligned}$$

(b)

$$\begin{aligned}
& (-10101,11| - 101)_2 \\
&= -10101,11 * 2^{-101} \\
&= -1010,111 * 2^{-100} \\
&= -101,0111 * 2^{-11} \\
&= -10,10111 * 2^{-10} \\
&= -1,010111 * 2^{-1}
\end{aligned}$$

(c)

$$\begin{aligned}
& -0,002DA|C)_{16} \\
&= -0,002DA * 16^C \\
&= -0,02DA * 16^B \\
&= -0,2DA * 16^A \\
&= -2,DA * 16^9
\end{aligned}$$

Aufgabe 3.3

(a)

$$\begin{aligned}
& 1011000 \\
& 1011000,0 \\
& Norm : \\
& 1,011000|1001 \\
& 1001 = 9 \\
& 9 + 127 = 136 = 128 + 8 = 10001000 \\
& 0|10001000|011000000000000000000000
\end{aligned}$$

(b)

$$\begin{aligned}
& -10011011,101 \\
& -1,0011011101|1001 \\
& 1|10001000|001101110100000000000000
\end{aligned}$$

Aufgabe 3.4

$$\begin{aligned}
& 7,516 * 10^6 + 9,9453 * 10^8 \\
& = (0,07516 + 9,9453)10^8 \\
& \dots
\end{aligned}$$

Aufgabe 3.5

$$\begin{aligned}
& (2,6538 * 10^3)x(3,1415 * 10^5) \\
& = (0,026538 * 10^5)x(3,1415 * 10^5) \\
& \dots
\end{aligned}$$

Aufgabe 3.6**(a)**

0A 44 69 65 73 65 0A 20 4C F6 73 75 6E 67 0A 20 20 62 72 69 6E 67 74 0A
 20 20 20 49 68 6E 65 6E 0A 20 20 20 20 28 66 61 73 74 29 0A 20 20 20 20
 20 31 35 20 50 75 6E 6B 74 65 21
 LF D i e s e LF SP L ö s u n g LF SP SP bringt LF
 SP SP SP I h n e n LF SP SP SP SP (fast) LF SP SP SP SP
 SP 15 P u n k t e !

(b)