Sistemas Digitais - Exercícios de Conversão

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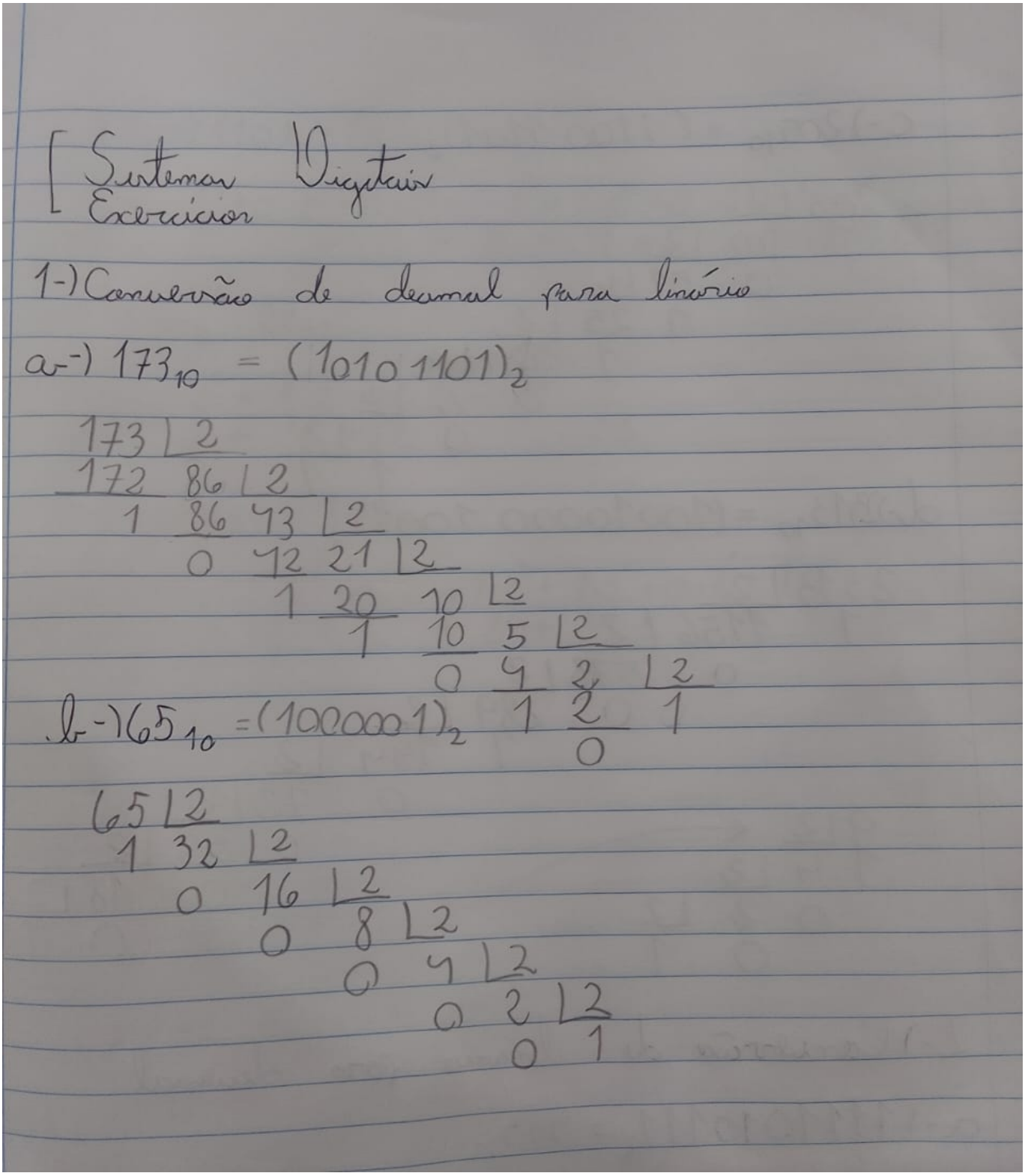
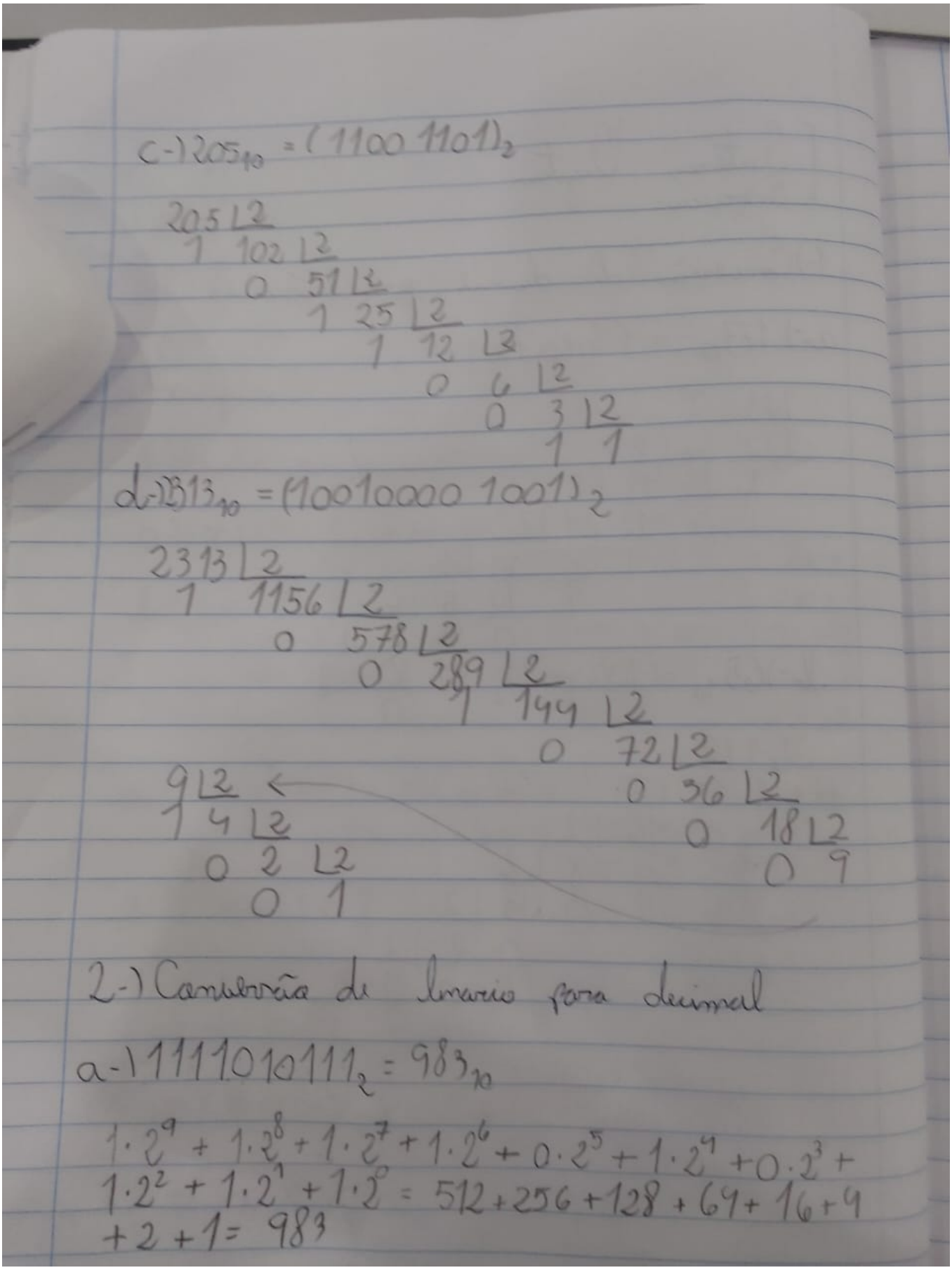
Exercícios





c-) $205_{10} = (11001101)_2$

205 | 2
1 102 | 2
0 51 | 2
1 25 | 2
1 12 | 2
0 6 | 2
0 3 | 2
1 1

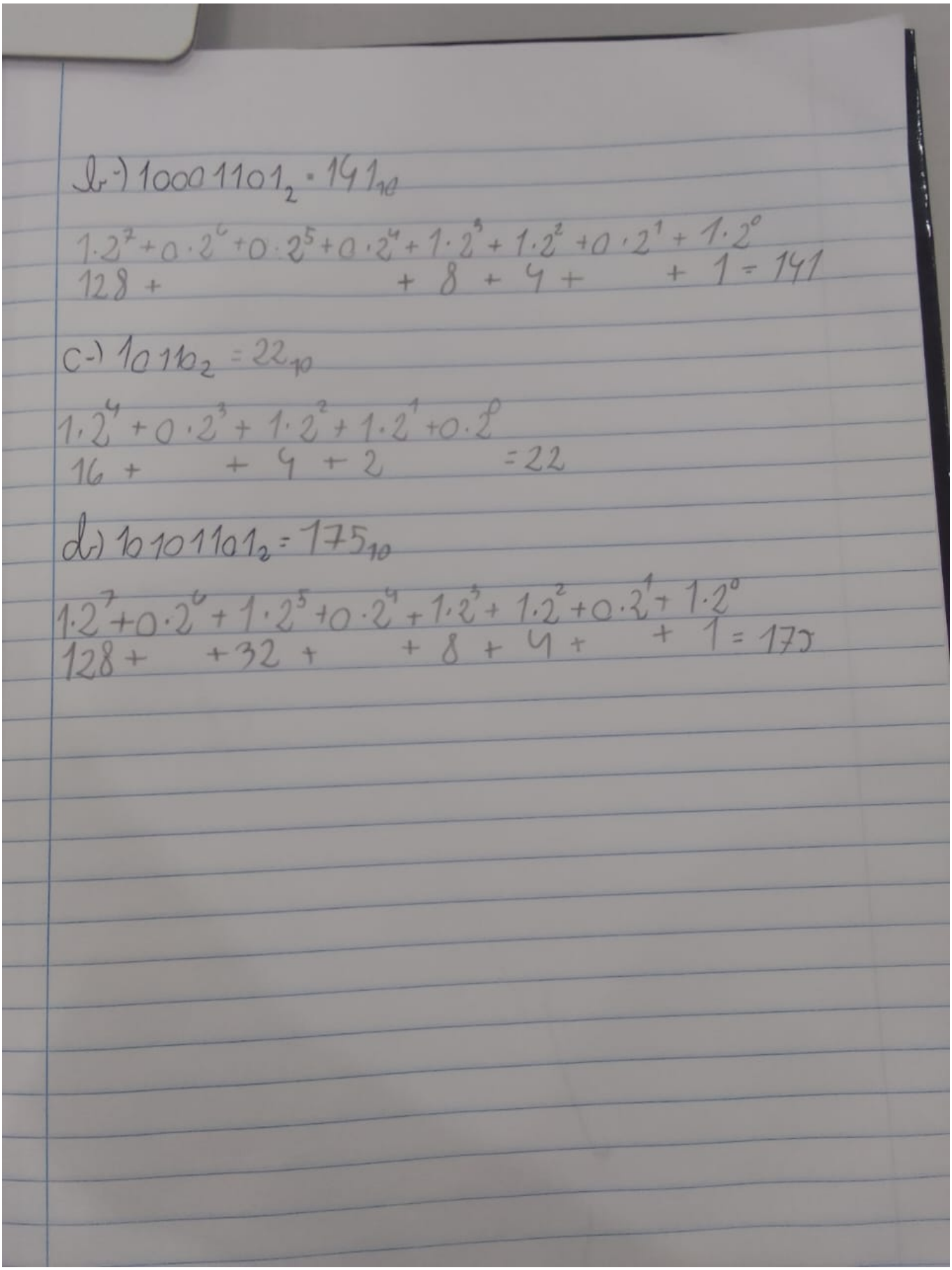
d-) $2313_{10} = (100100001001)_2$

2313 | 2
1 1156 | 2
0 578 | 2
0 289 | 2
1 144 | 2
0 72 | 2
0 36 | 2
0 18 | 2
0 9 | 2
1 4 | 2
0 2 | 2
0 1

2-) Conversão de binario para decimal

a-) $1111010111_2 = 983_{10}$

$1 \cdot 2^9 + 1 \cdot 2^8 + 1 \cdot 2^7 + 1 \cdot 2^6 + 0 \cdot 2^5 + 1 \cdot 2^4 + 0 \cdot 2^3 + 1 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0 = 512 + 256 + 128 + 64 + 16 + 4 + 2 + 1 = 983$



b.) $10001101_2 = 141_{10}$

$1 \cdot 2^7 + 0 \cdot 2^6 + 0 \cdot 2^5 + 0 \cdot 2^4 + 1 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0$
$128 + \quad + 8 + 4 + \quad + 1 = 141$

c.) $1011_2 = 22_{10}$

$1 \cdot 2^4 + 0 \cdot 2^3 + 1 \cdot 2^2 + 1 \cdot 2^1 + 0 \cdot 2^0$
$16 + \quad + 4 + 2 \quad = 22$

d.) $10101101_2 = 175_{10}$

$1 \cdot 2^7 + 0 \cdot 2^6 + 1 \cdot 2^5 + 0 \cdot 2^4 + 1 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0$
$128 + \quad + 32 + \quad + 8 + 4 + \quad + 1 = 175$