1 a) $10,5625_{10} = 1010,1001_2$

10 |2
0 5 |2
1 2 |2
0 1

0,5625 × 2 = 1,125
0,125 × 2 = 0,250
0,250 × 2 = 0,500
0,500 × 2 = 1

b) 255 |2
1 127 |2
1 63 |2
1 31 |2
1 15 |2
1 7 |2
1 3 |2
1 1

$1111\,1111_2$

c) 256 |2
0 128 |2
0 64 |2
0 32 |2
0 16 |2
0 8 |2
0 4 |2
0 2 |2
0 1

10000000

d) 01 = 1

e) 0 = 0

3) a) $b011_2$

$1 \cdot 2^0 + 1 \cdot 2^1 + 0 \cdot 2^2 + 0 \cdot 2^3 + 1 \cdot 2^4$

$1 + 2 + 0 + 0 + 16 = 19_{10}$