

1. Binärsystem (Dezimalsystem → Binärsystem)

Dezimalzahl	Binärzahl	Lösungsweg	
1	1	$1 : 2 = 0$ Rest: 1	↑
2	10	$2 : 2 = 1$ Rest: 0 $1 : 2 = 0$ Rest: 1	↑
3	11	$3 : 2 = 1$ Rest: 1 $1 : 2 = 0$ Rest: 1	↑
4	100	$4 : 2 = 2$ Rest: 0 $2 : 2 = 1$ Rest: 0 $1 : 2 = 0$ Rest: 1	↑
5	101	$5 : 2 = 2$ Rest: 1 $2 : 2 = 1$ Rest: 0 $1 : 2 = 0$ Rest: 1	↑
8	1000	$8 : 2 = 4$ Rest: 0 $4 : 2 = 2$ Rest: 0 $2 : 2 = 1$ Rest: 0 $1 : 2 = 0$ Rest: 1	↑
12	1100	$12 : 2 = 6$ Rest: 0 $6 : 2 = 3$ Rest: 0 $3 : 2 = 1$ Rest: 1 $1 : 2 = 0$ Rest: 1	↑
16	10000	$16 : 2 = 8$ Rest: 0 $8 : 2 = 4$ Rest: 0 $4 : 2 = 2$ Rest: 0 $2 : 2 = 1$ Rest: 0 $1 : 2 = 0$ Rest: 1	↑

32	100000	32 : 2 = 16 Rest: 0	↑
		16 : 2 = 8 Rest: 0	
		8 : 2 = 4 Rest: 0	
		4 : 2 = 2 Rest: 0	
		2 : 2 = 1 Rest: 0	
		1 : 2 = 0 Rest: 1	
33	100001	33 : 2 = 16 Rest: 1	↑
		16 : 2 = 8 Rest: 0	
		8 : 2 = 4 Rest: 0	
		4 : 2 = 2 Rest: 0	
		2 : 2 = 1 Rest: 0	
		1 : 2 = 0 Rest: 1	
400	110010000	400 : 2 = 200 Rest: 0	↑
		200 : 2 = 100 Rest: 0	
		100 : 2 = 50 Rest: 0	
		50 : 2 = 25 Rest: 0	
		25 : 2 = 12 Rest: 1	
		12 : 2 = 6 Rest: 0	
		6 : 2 = 3 Rest: 0	
		3 : 2 = 1 Rest: 1	
		1 : 2 = 0 Rest: 1	
1024	10000000000	1024 : 2 = 512 Rest: 0	↑
		512 : 2 = 256 Rest: 0	
		256 : 2 = 128 Rest: 0	
		128 : 2 = 64 Rest: 0	
		64 : 2 = 32 Rest: 0	
		32 : 2 = 16 Rest: 0	
		16 : 2 = 8 Rest: 0	
		8 : 2 = 4 Rest: 0	
		4 : 2 = 2 Rest: 0	
		2 : 2 = 1 Rest: 0	
		1 : 2 = 0 Rest: 1	

2. Binärsystem (Binärsystem → Dezimalsystem)

Binärzahl	Dezimalzahl	Lösungsweg	
1	1	$1 \cdot 1 = 1$	+
10	2	$0 \cdot 1 = 0$	+
		$1 \cdot 2 = 2$	
11	3	$1 \cdot 1 = 1$	+
		$1 \cdot 2 = 2$	
100	4	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$1 \cdot 4 = 4$	
101	5	$1 \cdot 1 = 1$	+
		$0 \cdot 2 = 0$	
		$1 \cdot 4 = 4$	
1000	8	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$0 \cdot 4 = 0$	
		$1 \cdot 8 = 8$	
1100	12	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$1 \cdot 4 = 4$	
		$1 \cdot 8 = 8$	
10000	16	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$0 \cdot 4 = 0$	
		$0 \cdot 8 = 0$	
		$1 \cdot 16 = 16$	

100000	32	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$0 \cdot 4 = 0$	
		$0 \cdot 8 = 0$	
		$0 \cdot 16 = 0$	
		$1 \cdot 32 = 32$	
100001	33	$1 \cdot 1 = 1$	+
		$0 \cdot 2 = 0$	
		$0 \cdot 4 = 0$	
		$0 \cdot 8 = 0$	
		$0 \cdot 16 = 0$	
		$1 \cdot 32 = 32$	
110010000	400	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$0 \cdot 4 = 0$	
		$0 \cdot 8 = 0$	
		$1 \cdot 16 = 16$	
		$0 \cdot 32 = 0$	
		$0 \cdot 64 = 0$	
		$1 \cdot 128 = 128$	
		$1 \cdot 256 = 256$	
10000000000	1024	$0 \cdot 1 = 0$	+
		$0 \cdot 2 = 0$	
		$0 \cdot 4 = 0$	
		$0 \cdot 8 = 0$	
		$0 \cdot 16 = 0$	
		$0 \cdot 32 = 0$	
		$0 \cdot 64 = 0$	
		$0 \cdot 128 = 0$	
		$0 \cdot 256 = 0$	
		$0 \cdot 512 = 0$	
		$1 \cdot 1024 = 1024$	