n-bit

```
 1100 1011 | 1011
-1011      |------
 00011     | 10010
 -1011
 (1)000
 +1011
 00110
 -1011
 (1)011
 +1011
 01101
 -1011
 (0)0101
  -1011
  (1)010
  +1011
  0101
```

Quotient = 18

```
  75+
 128
 ---
 203 | 11
  11 |----
 ---   18
 =93
  88
 ---
  =5
```

Divisor, Quotient → n bits

=> Dividend => 2n-1 bits

```
8257 | 130
780  |----
----   63
=457
 390
----
 =67
```

```
8257 -
8192
----
==65 -
  64
----
 =(1)
```

1024
2048
4096
8192

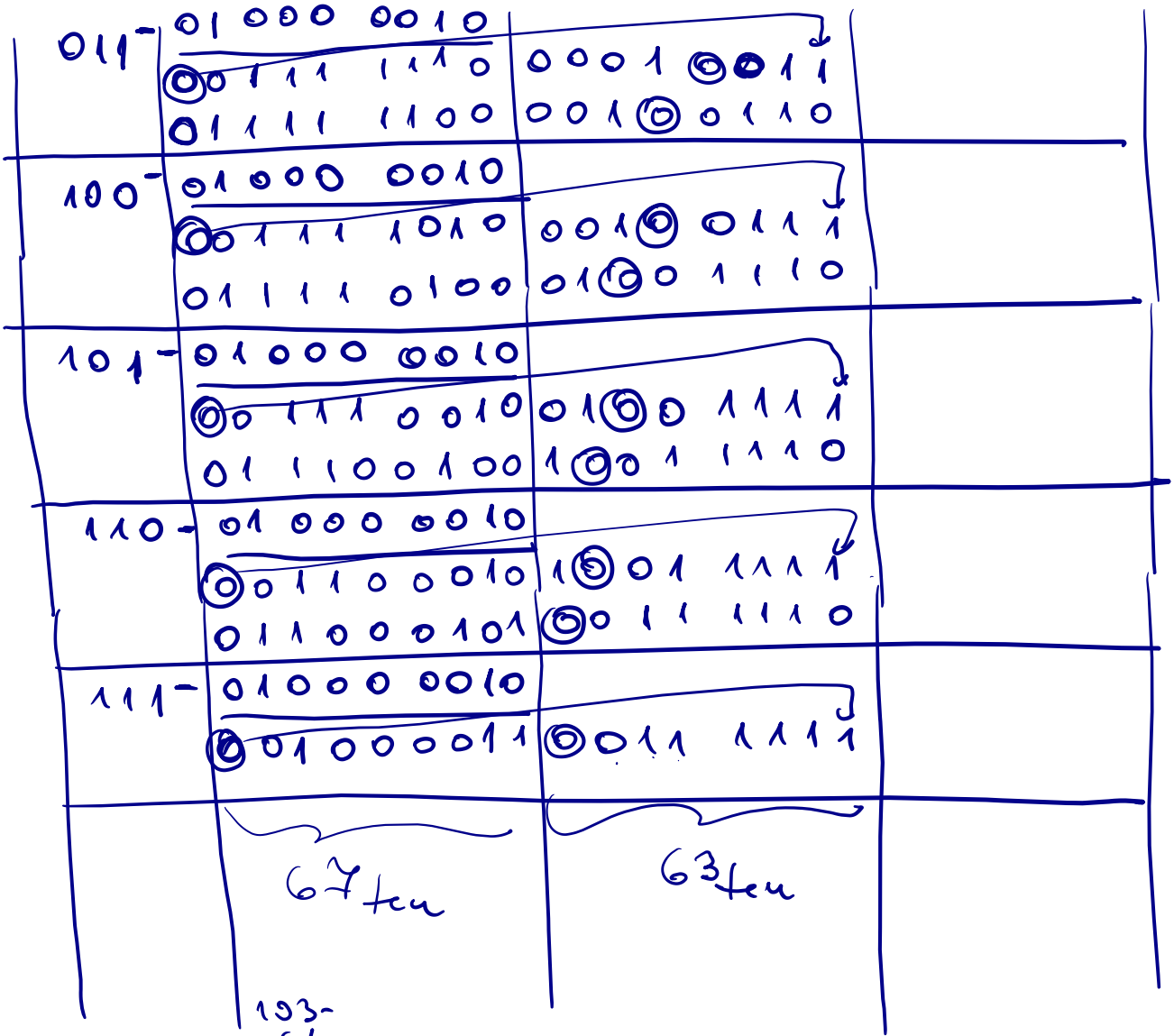
8257 ten

= 100,0000,1000,001, Reminder = 5

$\lceil \log_2 \text{no. of iterations} \rceil$

[ ]

COUNT	A	Q	M
000	00100 0000	1000 0010	1000 0010
	− 01000 0010		
	(1)1011 1110	1000 0010	
	+ 01000 0010		
	00100 00000		
	01000 0001	0000 0100	
001	− 01000 0010		
	(1)1111 1111	0000 0100	
	+ 01000 0010		
	01000 0001		
	10000 0010	0000 1000	
010	− 01000 0010		
	(0)1 0000 0000	0000 1001	
	100000 0000	0001 0010	



4800 | 103
412 | 46
=680
618
=62

103-
64
=39-
32
=7

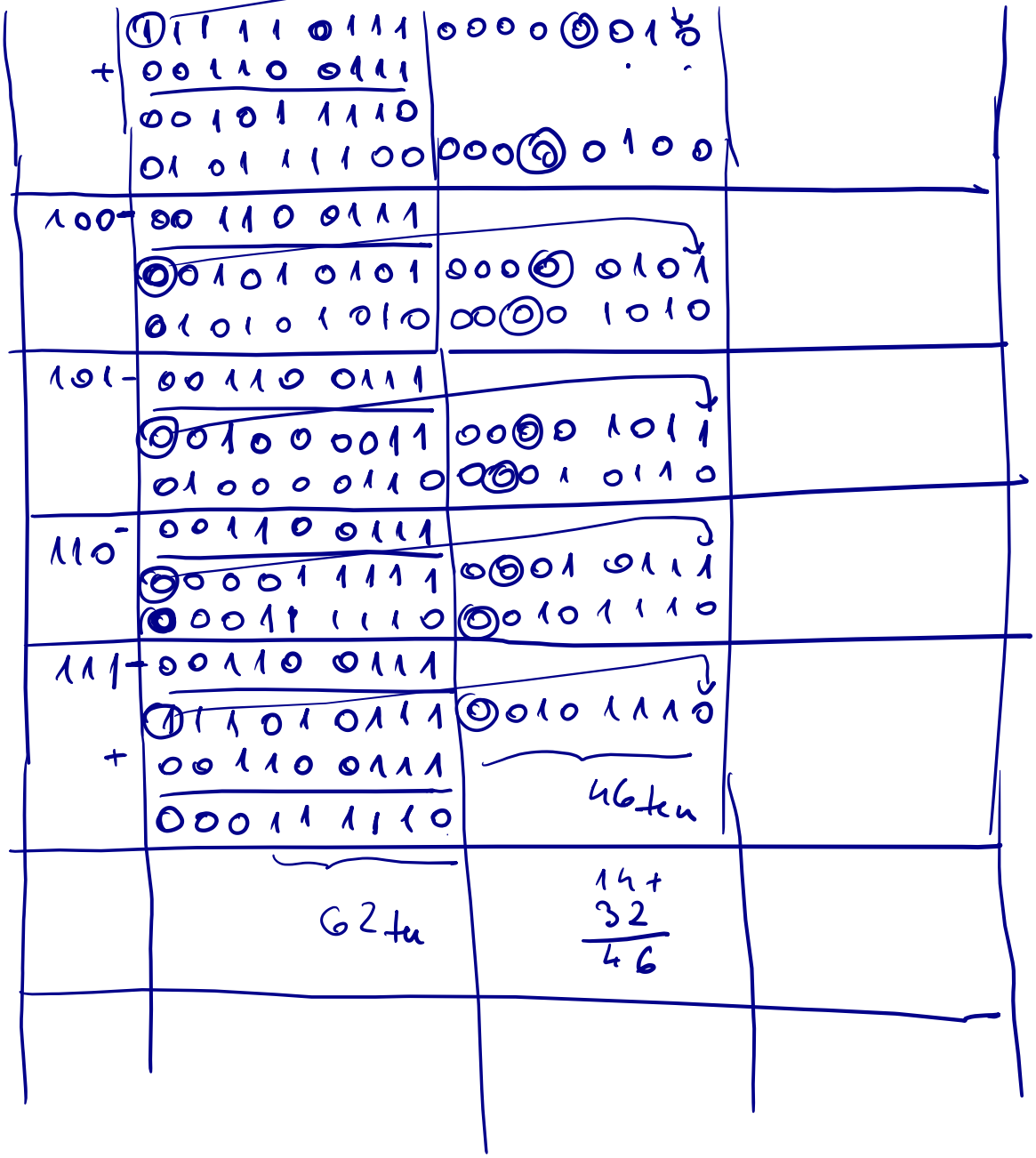
2048

4800_{ten} = 100101 100 0000

103_{ten} = 0110 0111

4800-
4096
=704-
512
192
128
=64

COUNT	A	Q	M
000	00010 0101	1000 0000	0110 0111
	- 00110 0111		
	1 1011 1110	1000 0000	
	+ 00110 0111		
	00010 0101		
	00100 1011	0000 0000	
001-	00110 0111		
	1 1110 0100	0000 0000	
	+ 00110 0111		
	00100 1011		
	01001 0110	0000 0000	
010-	00110 0111		
	00010 1111	0000 0001	
	00101 1110	0000 0010	
011-	00110 0111		


100-
101-
110-
111-
62ten
46ten
14+
32
46