

Dezimal

10^3	10^2	10^1	10^0
1000	100	10	1
	5	2	3

0
1
...
9

$$3 \cdot 1 = 3$$

$$2 \cdot 10 = 20$$

$$5 \cdot 100 = \frac{500}{523}$$

Dual
(Binär)

2^3	2^2	2^1	2^0
8	4	2	1
		1	0

0
1

$$1 \cdot 1 = 1$$

$$0 \cdot 2 = 0$$

$$1 \cdot 4 = \frac{4}{5}$$

Hexadezimal

16^3	16^2	16^1	16^0
4096	256	16	1
	6	5	8

0
...
9
A
...
F

$$8 \cdot 1 = 8$$

$$12 \cdot 16 = 192$$

$$6 \cdot 256 = \frac{1536}{1736}$$

$$28_{(16)}$$

$$0 \times 27 = 39_{(10)}$$

$$\begin{array}{cccccc}
 16 & 8 & 4 & 2 & 1 & \\
 \hline
 1 & 0 & 1 & 1 & 0 & (2)
 \end{array}$$

$$\begin{array}{r}
 2 \\
 4 \\
 16 \\
 \hline
 22
 \end{array}$$

$$498_{(10)}$$

$$- 256$$

$$242$$

$$- 128$$

$$114$$

$$- 64$$

$$50$$

$$- 32$$

$$18$$

$$- 16$$

$$2$$

$$\begin{array}{cccccccccccc}
 512 & 256 & 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 \\
 \hline
 0 & 1 & 1 & 1 & 1 & 1 & 0 & 0 & 1 & 0
 \end{array}$$

Horner - Schema

umgekehrt

$$\begin{array}{rcll} 58_{(10)} : 2 & = & 29 & \text{Rest } 0 \\ 29 : 2 & = & 14,5 \times 2 & 1 \\ 14 : 2 & = & 7 & 0 \\ 7 : 2 & = & 3,5 \times 2 & 1 \\ 3 : 2 & = & 1,5 \times 2 & 1 \\ 1 : 2 & = & 0,5 \times 2 & 1 \end{array}$$

111010

normal

1	1	1	0	1	0
+	+	+	+	+	+
0	2	6	14	28	58
<hr/>					
1	3	7	14	29	58

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$$1958_{(10)} : 16 = 122, \underbrace{375 \times 16}_{\text{green}} = 6$$

$$122 : 16 = 7, \underbrace{625 \times 16}_{\text{green}} = 10 \Rightarrow A$$

$$7 : 16 = 0, \underbrace{4375 \times 16}_{\text{green}} = 7$$



7A6

7	A	6
+	+	+
0	112	1952
7	122	1958

Handwritten annotations: Green arrows point from the bottom row to the top row. Above the first arrow is "x16 -", and above the second is "x16 -".

B C D - Code
 Binär codierte Dezimalzahl

BCD

3	9	5
0011	1001	0101

512 256 128 64 32 16 8 4 2 1

Binär

512
 256
 128
 16
 4
 1

 917