

* Conversão decimal para binário

01-) $147 \div 2$

$\begin{array}{r} 147 \\ -14 \\ \hline 07 \end{array}$	$\begin{array}{r} 73 \\ -6 \\ \hline 13 \end{array}$	$\begin{array}{r} 36 \\ -2 \\ \hline 18 \end{array}$	$\begin{array}{r} 9 \\ -8 \\ \hline 1 \end{array}$	$\begin{array}{r} 4 \\ -4 \\ \hline 0 \end{array}$	$\begin{array}{r} 2 \\ -2 \\ \hline 0 \end{array}$	$\begin{array}{r} 1 \\ -1 \\ \hline 0 \end{array}$
(1)	(1)	(0)	(1)	(0)	(0)	(1)

10010011

(E)

02-) $189 \div 2$

$\begin{array}{r} 189 \\ -18 \\ \hline 09 \end{array}$	$\begin{array}{r} 94 \\ -8 \\ \hline 47 \end{array}$	$\begin{array}{r} 23 \\ -2 \\ \hline 11 \end{array}$	$\begin{array}{r} 5 \\ -4 \\ \hline 1 \end{array}$	$\begin{array}{r} 2 \\ -2 \\ \hline 0 \end{array}$	$\begin{array}{r} 1 \\ -1 \\ \hline 0 \end{array}$
(1)	(0)	(1)	(1)	(0)	(1)

10111101

(D)

03-) $191 \div 2$

$\begin{array}{r} 191 \\ -18 \\ \hline 11 \end{array}$	$\begin{array}{r} 95 \\ -8 \\ \hline 47 \end{array}$	$\begin{array}{r} 23 \\ -2 \\ \hline 11 \end{array}$	$\begin{array}{r} 5 \\ -4 \\ \hline 1 \end{array}$	$\begin{array}{r} 2 \\ -2 \\ \hline 0 \end{array}$	$\begin{array}{r} 1 \\ -1 \\ \hline 0 \end{array}$
(1)	(1)	(1)	(1)	(0)	(1)

10111111

(C)

20/9/21

Gabriela de Jesus

20/9/21

04-) $247 \div 2$

$$\begin{array}{r}
 247 \div 2 \\
 \underline{-2} \\
 04 \\
 \underline{-4} \\
 07 \\
 \underline{-6} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 123 \div 2 \\
 \underline{-12} \\
 03 \\
 \underline{-2} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 61 \div 2 \\
 \underline{-60} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 30 \div 2 \\
 \underline{-30} \\
 0
 \end{array}
 \quad
 \begin{array}{r}
 15 \div 2 \\
 \underline{-14} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 7 \div 2 \\
 \underline{-6} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 3 \div 2 \\
 \underline{-2} \\
 1
 \end{array}$$

11110111

(B)

05-) $219 \div 2$

$$\begin{array}{r}
 219 \div 2 \\
 \underline{-2} \\
 019 \\
 \underline{-18} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 109 \div 2 \\
 \underline{-100} \\
 09 \\
 \underline{-8} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 54 \div 2 \\
 \underline{-54} \\
 0
 \end{array}
 \quad
 \begin{array}{r}
 27 \div 2 \\
 \underline{-26} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 13 \div 2 \\
 \underline{-12} \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 6 \div 2 \\
 \underline{-6} \\
 0
 \end{array}
 \quad
 \begin{array}{r}
 3 \div 2 \\
 \underline{-2} \\
 1
 \end{array}$$

11011011

(C)

Conversões binário \rightarrow decimal

$$\begin{array}{r}
 06-) \quad 0011101 \\
 \begin{array}{cccccccc}
 2^7 & 2^6 & 2^5 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\
 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1
 \end{array}
 \end{array}$$

(B)

$$0 + 0 + 32 + 16 + 8 + 4 + 0 + 1 = 61$$

$$\begin{array}{r}
 07-) \quad 01100101 \\
 \begin{array}{cccccccc}
 2^7 & 2^6 & 2^5 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\
 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1
 \end{array}
 \end{array}$$

(E)

$$0 + 64 + 32 + 0 + 0 + 4 + 0 + 1 = 101$$

08.) 0 1 1 1 0 1 1
128 64 32 16 8 4 2 1

$$0 + 64 + 32 + 16 + 8 + 0 + 2 + 1 = 123$$

(C)

09.) 1 1 1 0 1 0 1 0
128 64 32 16 8 4 2 1

$$128 + 64 + 32 + 0 + 8 + 0 + 2 + 0 = 234$$

(A)

10.) 1 1 0 1 1 1 0
128 64 32 16 8 4 2 1

$$128 + 64 + 0 + 16 + 8 + 4 + 2 + 0 = 222$$

(D)

Conversão decimal \rightarrow hexadecimal

11.) 247 $\div 16$
- 16 15
87
- 80
7

F7

(B)

12.) 291 $\div 16$
- 16 18 $\div 16$
131 - 16 (1)
- 128 (2)
(3)

123

(A)

13.) 193 $\div 16$
- 16 (12)
33
- 32
(1)

C1

(E)

14-)
$$\begin{array}{r} 237 \\ -16 \\ \hline 221 \\ -64 \\ \hline 157 \end{array}$$

Diagram showing a loop from the result 157 to the divisor 16, indicating a remainder of 14.

ED

(B)

15-)
$$\begin{array}{r} 171 \\ -16 \\ \hline 155 \end{array}$$

Diagram showing a loop from the result 155 to the divisor 16, indicating a remainder of 10.

AB

(C)

Conversão hexadecimal \rightarrow decimal

16-) 9 A

Diagram showing the conversion of hexadecimal 9A to decimal:

$$\begin{array}{r} 9 \times 16^1 + 10 \times 16^0 \\ = 144 + 10 = 154 \end{array}$$

(D)

17-) C A

Diagram showing the conversion of hexadecimal CA to decimal:

$$\begin{array}{r} 12 \times 16^1 + 10 \times 16^0 \\ = 192 + 10 = 202 \end{array}$$

(C)

18-) E 5

Diagram showing the conversion of hexadecimal E5 to decimal:

$$\begin{array}{r} 14 \times 16^1 + 5 \times 16^0 \\ = 224 + 5 = 229 \end{array}$$

(A)

19-) F A

15 10
16 1

(B)

$$240 + 10 = 250$$

20-) 7 F

7 15
16 1

(D)

$$112 + 15 = 127$$

Conversão hexadecimal \rightarrow binário

21-) 9 F

9	15
^{3 2 1 0} 2 2 2 2	^{3 2 1 0} 2 2 2 2
8 4 2 1	8 + 4 + 2 + 1
1 0 0 1	1 1 1 1

1001 1111

(A)

22-) C 2

12	2
^{3 2 1 0} 2 2 2 2	^{3 2 1 0} 2 2 2 2
1 1 0 0	0 0 1 0

1100 0010

(D)

Conversão binário → hexadecimal

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23-)
$$\begin{array}{cccc} 0 & 1 & 1 & 1 \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array} \quad \begin{array}{cccc} 1 & 1 & 1 & 1 \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array} \bigg\} \times$$

$$\begin{array}{cccc} 8 & 4 & 2 & 1 \end{array} \quad \begin{array}{cccc} 8 & 4 & 2 & 1 \end{array}$$

$$\underbrace{0+4+2+1}_7 \quad \underbrace{8+4+2+1}_{15 = F}$$

7F

(B)

24-)
$$\begin{array}{cccc} 0 & 0 & 0 & 1 \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array} \quad \begin{array}{cccc} 1 & 1 & 1 & 1 \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array} \bigg\} \times$$

$$\begin{array}{cccc} 8 & 4 & 2 & 1 \end{array} \quad \begin{array}{cccc} 8 & 4 & 2 & 1 \end{array}$$

$$\underbrace{0+0+0+1}_1 \quad \underbrace{8+4+2+1}_{15 = F}$$

1F

(C)

25-)
$$\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array} \quad \begin{array}{cccc} 1 & 1 & 0 & 0 \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array} \bigg\} \times$$

$$\begin{array}{cccc} 8 & 4 & 2 & 1 \end{array} \quad \begin{array}{cccc} 8 & 4 & 2 & 1 \end{array}$$

$$\underbrace{8+0+0+0}_8 \quad \underbrace{8+4+0+0}_{12 = C}$$

8C

(A)