

ДВОИЧНАЯ АРИФМЕТИКА

Сложение (+)

$$0+0=0$$

$$0+1=1$$

$$1+0=1$$

$$1+1=10$$

Пример №1:
 $10111+1110$

$$\begin{array}{r} 1 1 1 \\ + 10111 \\ 1110 \\ \hline 100101 \end{array}$$

Пример №2:
 $100111+10101$

$$\begin{array}{r} 1 1 1 1 \\ + 100111 \\ 10101 \\ \hline 110100 \end{array}$$

Вычитание (-)

$$0-0=0$$

$$1-0=1$$

$$1-1=0$$

$$10-1=1$$

Деление (/)

$$0/1=0$$

$$1/1=1$$

Умножение (*)

$$0*0=0$$

$$0*1=0$$

$$1*0=0$$

$$1*1=1$$

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Умножение (*)

$$0 * 0 = 0$$

$$0 * 1 = 0$$

$$1 * 0 = 0$$

$$1 * 1 = 1$$

Пример №1:

$$1110 * 11$$

$$\begin{array}{r} * 1110 \\ 11 \\ \hline + 1110 \\ 1110 \\ \hline 101010 \end{array}$$

Пример №2:

$$1001 * 101$$

$$\begin{array}{r} * 1001 \\ 101 \\ \hline + 1001 \\ 0000 \\ 0000 \\ \hline 101101 \end{array}$$

Вычитание (-)

$$0 - 0 = 0$$

$$1 - 0 = 1$$

$$1 - 1 = 0$$

$$10 - 1 = 1$$

Деление (/)

$$0 / 1 = 0$$

$$1 / 1 = 1$$

Сложение (+)

$$0 + 0 = 0$$

$$0 + 1 = 1$$

$$1 + 0 = 1$$

$$1 + 1 = 10$$

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Вычитание (-)

$$0-0=0$$

$$1-0=1$$

$$1-1=0$$

$$10-1=1$$

Пример №1:

$$1011-101$$

$$\begin{array}{r} \overset{10}{1}011 \\ - \quad 101 \\ \hline 110 \end{array}$$

Пример №2:

$$110000*1101$$

$$\begin{array}{r} \overset{1}{1}\overset{1}{1}\overset{1}{0}\overset{10}{0}00 \\ \quad 1101 \\ \hline 100011 \end{array}$$

Умножение (*)

$$0*0=0$$

$$0*1=0$$

$$1*0=0$$

$$1*1=1$$

Деление (/)

$$0/1=0$$

$$1/1=1$$

Сложение(+)

$$0+0=0$$

$$0+1=1$$

$$1+0=1$$

$$1+1=10$$

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Сложение двоичных чисел

A screenshot of a worksheet titled "Сложение двоичных чисел" (Binary Addition). It contains 8 problems, each in a white box with a blue pin icon at the top. The problems are labeled А through И. Each problem shows a binary addition problem on a grid, with the result to be entered in a box below. The problems are:

- А: $\begin{array}{r} 1100011_2 \\ + 11100_2 \\ \hline \end{array}$
- Б: $\begin{array}{r} 1011110_2 \\ + 11011_2 \\ \hline \end{array}$
- В: $\begin{array}{r} 11011000_2 \\ + 101001_2 \\ \hline \end{array}$
- Г: $\begin{array}{r} 11100000_2 \\ + 101010_2 \\ \hline \end{array}$
- Д: $\begin{array}{r} 1000111_2 \\ + 10000_2 \\ \hline \end{array}$
- Е: $\begin{array}{r} 1001001_2 \\ + 1010_2 \\ \hline \end{array}$
- Е: $\begin{array}{r} 10101001_2 \\ + 101001_2 \\ \hline \end{array}$
- Ж: $\begin{array}{r} 11000000_2 \\ + 100011_2 \\ \hline \end{array}$
- З: $\begin{array}{r} 101101000_2 \\ + 111110011_2 \\ \hline \end{array}$
- И: $\begin{array}{r} 111111000_2 \\ + 100100001_2 \\ \hline \end{array}$

<https://learningapps.org/9085549>

Умножение двоичных чисел

A screenshot of a worksheet titled "Умножение двоичных чисел" (Binary Multiplication). It contains 9 problems, each in a white box with a blue pin icon at the top. The problems are numbered 1 through 9. Each problem shows a binary multiplication problem on a grid, with the result to be entered in a box below. The problems are:

- 1. $\begin{array}{r} 111001_2 \\ \times 100_2 \\ \hline \end{array}$
- 2. $\begin{array}{r} 101101_2 \\ \times 101_2 \\ \hline \end{array}$
- 3. $\begin{array}{r} 110001_2 \\ \times 110_2 \\ \hline \end{array}$
- 4. $\begin{array}{r} 101111_2 \\ \times 110_2 \\ \hline \end{array}$
- 5. $\begin{array}{r} 111010_2 \\ \times 111_2 \\ \hline \end{array}$
- 7. $\begin{array}{r} 1001001_2 \\ \times 1000_2 \\ \hline \end{array}$
- 8. $\begin{array}{r} 1001000_2 \\ \times 1001_2 \\ \hline \end{array}$
- 9. $\begin{array}{r} 1010000_2 \\ \times 1010_2 \\ \hline \end{array}$

<https://learningapps.org/9212848>