

Двоичная арифметика

Сложение

$$0 + 0 = 0$$

$$0 + 1 = 1$$

$$1 + 0 = 1$$

$$1 + 1 = 10$$

$$\begin{array}{r} 1010 \\ + 1011 \\ \hline 10101 \end{array}$$

$$\begin{array}{r} 111 \\ + 1 \\ \hline 10110 \end{array}$$

- 1) $101100 + 10011 = 111111$
- 2) $111011 + 1001111 = 10001010$

Умножение

$$0 * 0 = 0$$

$$0 * 1 = 0$$

$$1 * 0 = 0$$

$$1 * 1 = 1$$

$$\begin{array}{r} *101 \\ 101 \\ \hline 101 \\ + 000 \\ \hline 11001 \end{array}$$
$$\begin{array}{r} *111 \\ 1 \\ \hline 111 \\ + 111 \\ \hline 111 \\ \hline 1101001 \end{array}$$

$$1) \quad 1011 * 11 = 100001$$

$$2) \quad 101 * 1001 = 101101$$

Вычитание

$$0 - 0 = 0$$

$$1 - 0 = 1$$

$$1 - 1 = 0$$

$$10 - 1 = 1$$

$$\begin{array}{r} & \overset{0\ 110}{-} \\ 1011 & - \\ \hline 1010 & \\ \hline \textcolor{red}{0001} & \end{array} \quad \begin{array}{r} & \overset{0\ 110}{-} \\ 1001 & - \\ \hline 110 & \\ \hline \textcolor{red}{0011} & \end{array}$$

- 1) $1011 - 101 = 110$
- 2) $10001 - 1101 = 100$

Выполнить самостоятельно

1 вариант

- 1) $110111 + 1110111 =$
- 2) $1001111 + 111001 =$
- 3) $100011 - 1110 =$
- 4) $1100110 - 1000111 =$
- 5) $10011 * 110 =$
- 6) $11011 * 1010 =$

2 вариант

- 1) $110101 + 1010101 =$
- 2) $1101101 + 101011 =$
- 3) $101011 - 11010 =$
- 4) $1110110 - 1010111 =$
- 5) $11001 * 1011 =$
- 6) $10011 * 111 =$