

Tinlergen

54 6700 $\xrightarrow{\text{g' a g' a
+ tinlergen}}$

$$\begin{array}{r} 999999 \\ - 546700 \\ \hline 453299 \end{array}$$

1011001 $\xrightarrow{\text{1'e time}}$ 0100110

2389 $\xrightarrow{10'a}$ $\underbrace{9999 - 2389 + 1}_{7611}$

2'ye göre tünleyer:

İkili sayılarda bir sayının 2'ye göre tünleyeri alınırken en düşük önemli bitten başlayarak Sıfırlar ayırılır, ^{yanındaki} 1 değeri de ayırılır yazılır.



$$\begin{array}{r}
 72532 - \underline{13250} \\
 + \quad 86750 \\
 \hline
 \end{array}
 =
 \begin{array}{r}
 \downarrow \\
 159282 \\
 100000 \\
 \hline
 59282
 \end{array}$$

$$\begin{array}{r}
 13250 - \underline{72532} \\
 + \quad 27468 \\
 \hline
 \end{array}
 =
 \begin{array}{r}
 40718 \\
 100000 \\
 \hline
 - 59282
 \end{array}$$

00110010



11001110



1111 1111

0011 0010



11001101



11001110

Tam Sayı Gösterim

1. İşaretsiz normal ikili
2. İşaretsiz 1'e göre bitimler
3. İşaretsiz 2'ye göre bitimler

ikili pozitif en solunda 0 yazılır.

negatif bir sayı solunda 1 yazılır.

işareti $\frac{S}{1}$ 000 111 0

işareti 1'e göre tim.

işareti 2'ye göre tim.

$\frac{S}{1}$
 $\frac{S}{1}$

111 000 1

111 000 0

negatif

$$A - B = ①$$

$$\begin{array}{r}
 +6 \\
 +13 \\
 \hline
 19
 \end{array}$$

$$\begin{array}{r}
 0000\ 0110 \\
 0000\ 1101 \\
 + \\
 \hline
 0001\ 0011
 \end{array}$$

$$2^4 + 2^1 + 2^0$$

2^4 e 2^0 →

$$\begin{array}{r}
 -6 \\
 \hline
 1111\ 010
 \end{array}$$

$$\begin{array}{r}
 -6 \quad \rightarrow \quad 1111010 \\
 -13 \quad \rightarrow \quad 11110011 \\
 \hline
 -19 \rightarrow \quad 11101101
 \end{array}$$

00001101

$$\begin{array}{r}
 00010011 \\
 \hline
 +19
 \end{array}
 \xrightarrow{2'ye.} 11101101$$

-19

Toplama ile çıkarma

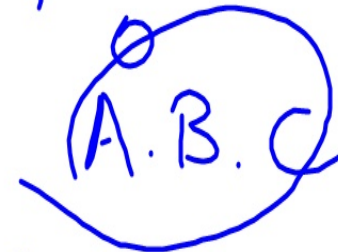
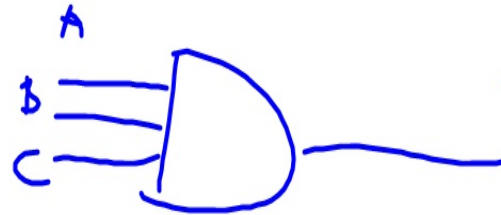
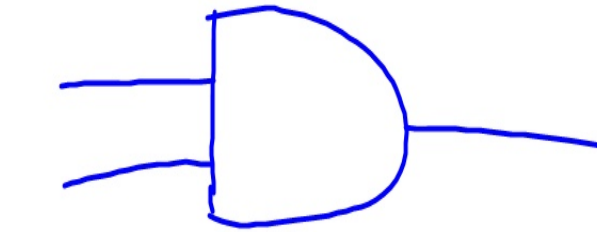
$$80 + (-70) =$$

$$\begin{array}{r} 01010000 \\ + 01000110 \\ \hline 01010110 \end{array}$$

$$\begin{array}{r} 01010000 \\ 10111010 \\ + \\ \hline 00001010 \\ \hline 10 \end{array}$$

AND (VE)

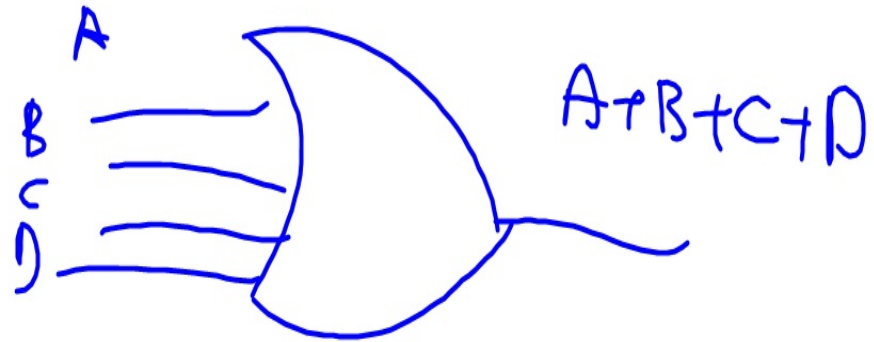
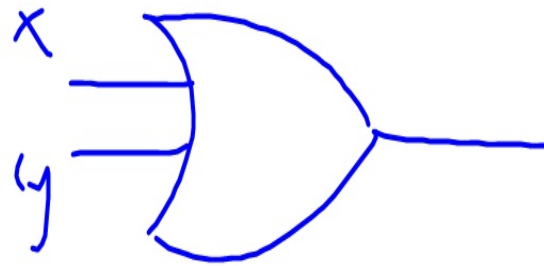
x	y	(x.y)
0	0	0
0	1	0
1	0	0
1	1	1



if (1 2 3) {
}

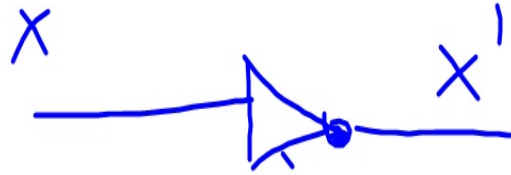
OR (VEYA)

x	y	$x + y$
0	0	0
0	1	1
1	0	1
1	1	1

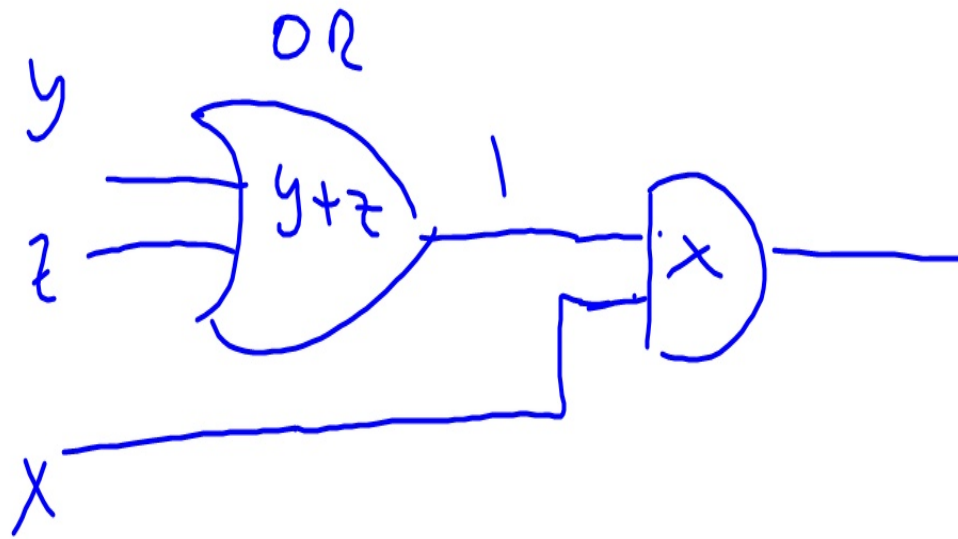


Not

x	x'
0	1
1	0



x	y	z		
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	1	0
1	0	0	0	0
1	0	1	0	0
1	1	0	1	1
1	1	1	1	1



$$\frac{x \cdot (y+z)}{000\dots}$$

FPGA Vhdl
Verilog