

$$237_{(8)} = 2 \cdot 8^2 + 3 \cdot 8^1 + 7 \cdot 8^0$$

$$237_{(16)} = 2 \cdot 16^2 + 3 \cdot 16^1 + 7 \cdot 16^0$$

$$237_{(10)} = 2 \cdot 10^2 + 3 \cdot 10^1 + 7 \cdot 10^0$$

$$10110_{(2)} = 1 \cdot 2^4 + 0 \cdot 2^3 + 1 \cdot 2^2 + 1 \cdot 2^1 + 0 \cdot 2^0 = 22_{(10)}$$

$$\Leftrightarrow 1$$

$$326421 \cdot 1$$

$$110101,1_{(2)} = 32 + 16 + 2 + 0,5 = 53,5$$

isti proces

na se

ostalo brojine
sustave

$$(A,A)_8 = 1 \cdot 8^{-1} + 4 \cdot 8^0 + 4 \cdot 8^{-1}$$

$$59_{(10)} = \underline{111011}_{(2)}$$

$$59 : 2 = 29 \quad 1$$

$$29 : 2 = 14 \quad 1$$

$$14 : 2 = 7 \quad 0$$

$$7 : 2 = 3 \quad 1$$

$$3 : 2 = 1 \quad 1$$

$$1 : 2 = 0 \quad 1$$

$$0 : 2 = 0 \quad 0$$

$$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 0 \end{array}$$



$$156_{(10)} = \underline{10011100}_{(2)}$$

$$156 : 2 = 78 \quad 0$$

$$78 : 2 = 39 \quad 0$$

$$39 : 2 = 19 \quad 1$$

$$19 : 2 = 9 \quad 1$$

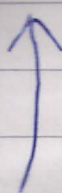
$$9 : 2 = 4 \quad 1$$

$$4 : 2 = 2 \quad 0$$

$$2 : 2 = 1 \quad 0$$

$$1 : 2 = 0 \quad 1$$

$$\begin{array}{c} 0 \\ 0 \\ 1 \\ 1 \\ 1 \\ 0 \\ 0 \\ 1 \end{array}$$



Isu decimale sre se amozu

$$37,4_{(10)} = \frac{3768421}{100101} \quad (2)$$

$$\begin{array}{l} 0,4 \cdot 2 \\ 0,8 \cdot 2 \end{array} \quad \begin{array}{l} 0 \\ 0 \end{array}$$

$$1,6 \quad 1$$

$$\begin{array}{l} 0,6 \cdot 2 \\ 1,2 \end{array} \quad \begin{array}{l} 1 \\ 1 \end{array}$$

$$0,2 \cdot 2 \quad 0$$

$$0,4 \cdot 2 \quad 0$$

$$0,8 \quad 1$$

$$\begin{array}{c} 635_{(10)} \\ \swarrow \quad \downarrow \quad \searrow \\ 421 \quad 421 \quad 421 \\ 110 \quad 011 \quad 100 \end{array}$$

$$= 110011101$$

kor.

11,01

Ochredit: známe číslo nedostajíc da zjednotiť hurode
tých -- $7^3(8) = A3$ -- (96) kester u testy!!!

Priručite broj $(A2)_8$ u obliku polinoma (V testu!!!)

$$4 \cdot 8^1 + 2 \cdot 8^0 \checkmark$$

21-9-2

12,07

$$= 9 \cdot 8^1 + 2 \cdot 8^0 + 0 \cdot 8^{-1} + 7 \cdot 8^{-2}$$

Binarna metoda

$$\begin{array}{r}
 13 \rightarrow \\
 + 9 \\
 \hline
 22
 \end{array}
 \begin{array}{|c|c|c|c|}
 \hline
 1 & 1 & 0 & 1 & A \\
 \hline
 1 & 0 & 0 & 1 & B \\
 \hline
 1 & 0 & 1 & 1 & C \\
 \hline
 1 & 0 & 1 & 1 & 0 \\
 \hline
 \end{array}
 \text{ - carry register}$$

$$\begin{array}{r}
 11 \\
 03 \text{ (7)} \text{ (8)} \\
 + 14 \text{ (5)} \text{ (8)} \\
 \hline
 204
 \end{array}
 \rightarrow 12 \text{ (8)} = 4$$

$$\begin{array}{r}
 \textcircled{1} \quad \textcircled{1} \\
 03E \rightarrow 14 \\
 + \textcircled{A} \textcircled{B} \textcircled{D} \rightarrow 13 \quad + 27 - 16 = 11 = B \\
 \hline
 16FB \rightarrow \begin{array}{l} 12 \\ 10 \end{array} \quad \begin{array}{l} 22 - 16 = 6 \end{array}
 \end{array}$$

-142 - metoda drugog komplementa

$$\begin{array}{|c|c|c|c|c|c|}
 \hline
 1 & 2 & 8 & 3 & 2 & 1 & 6 & 1 & 3 & 4 & 1 & 2 & 1 & 1 \\
 \hline
 0 & 1 & 0 & 0 & 0 & 1 & 1 & 1 & 0 & & & & &
 \end{array}$$

$$\begin{array}{|c|c|c|c|c|c|}
 \hline
 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 1 & & & & &
 \end{array}
 \rightarrow \text{metoda 1 - komplementa}$$

$$\begin{array}{|c|c|c|c|c|c|}
 \hline
 1 & 0 & 1 & 1 & 1 & 0 & 0 & 1 & 0 & & & & &
 \end{array}
 \rightarrow \text{metoda 2 - komplementa}$$

$$\begin{array}{r}
 -128 + 32 + 16 + 2 + 1 \\
 11100111
 \end{array}$$

$$-128 + 64 + 32 + 4 + 2 + 1 = -25$$

$$10111010 = -70$$

$$11001000 = -54$$

$$-128 + 32 + 16 + 8 + 4 = -70$$

$$96 - 42 = 54$$

$$128 \ 64 \ 32 \ 16 \ 8 \ 4 \ 2 \ 1$$

$$01100000 = 96$$

$$\cancel{001010}$$

$$96 + (-42)$$

$$00101010 = 42$$

$$11010101$$

1+

$$11010110 = -42$$

$$01100000$$

$$+ 11010110$$

$$\begin{array}{ccccccc} & & 32 & 16 & 8 & 4 & 2 & 1 \\ \times & 0 & 0 & 1 & 1 & 0 & 1 & 1 & 0 \end{array}$$

Vš: metode 1 - komplementa, 2 - komplementa i
drući naj + zbrajanje i odzbrajanje +
zapis decimalni u binarnom, IEEE 754
standard.

zapiši 42,75 u 32-bitnom registru prema IEEE 754 standardu

1. Broj pretvori u binarni

$$42_{(10)} = 101010_{(2)}$$

$$0,75 \cdot 2 = 1,5$$

$$0,5 \cdot 2 = 1,0$$

$$42,75_{(10)} = 101010,11_{(2)}$$

zapiši s pomnoženim zarezom: $1,0101011 \cdot 2^5$

Zbirajući sadržaj čitke u testu

10010011

$$93 = 223_{(8)}$$

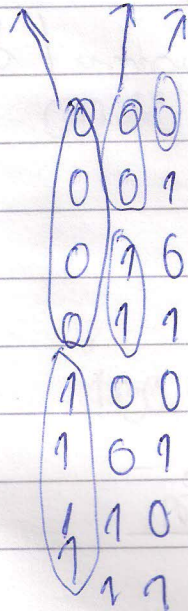
---0110011
01001---

bit će u testu

Kodirani

→ DEKODIRANJE - OBRNUTO

$$2^2 = 4 \quad 2^1 = 2 \quad 2^0 = 1$$



KODIRANJE

$$237_{(10)} = \underline{0010 \ 0011 \ 0111} \quad (\text{BCD kod})$$

$$277_{(10)} = \underline{1110 \ 1101} \quad (2)$$

BCD kod i binarni zapis menaju mese jedra sa drugom

$$39 = 26$$

$$\begin{array}{r} 0011 \ 0101 \\ + 1000 \ 0110 \\ \hline \end{array}$$

1011 (poteško kodiranje)
0110 → dodajemo +6

$$\begin{array}{r} 0061 \\ 0011 \ 0001 \\ 1000 \ 0001 \\ \hline \end{array}$$

$$\begin{array}{r} \underline{1100 \ 0001} \rightarrow \text{poteško kodiranje (dodaj +6)} \\ + \underline{10110} \\ \hline 1 \ 0010 \ 0001 \end{array}$$

mora od 10
ne postoji u tabeli
mora se +6

$$\begin{array}{r} 1101 \ 0111 / 0000 \ 1101, 1101 / 1000 \\ = \underline{6 \ 0 \ 84} \end{array}$$

Uzdevs - 3 kod

smi kocijini + 3 kodu izskaidrojums / detals

$$\begin{array}{r} 378 \\ \downarrow \downarrow \downarrow \\ +3 +3 +3 \end{array} \begin{array}{l} = \\ \hline \end{array} \begin{array}{r} 8421 \quad 8421 \quad 8421 \\ 0110 \quad 1010 \quad 1001 \end{array} \quad (x5-3)$$

detalējums

$$\begin{array}{r} 0011 / 1001 / 1100 / 1000 / 0000 \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ -3 \quad -3 \quad -3 \quad -3 \quad 0-3 \end{array} \quad (x5-3) = \underline{0695^2}$$

2421 - kod - vajadzē uzpildīt tabulu

{	0000
	0001
	0010
	0011
	0100
	0101
	0110
	0111
	1000
	1001
1010	
1011	
1100	
1101	
1110	
1111	

$$378_{(10)} = \frac{0011\ 1101\ 1110}{2421}$$

$$0011|1101|1100|1000|0000_{(2421)} = \frac{3?6?0}{(10)}$$

0)
$$\begin{array}{cccc} 8 & 1 & 21 & 8421 \\ 1001 & :0011 & , & 1110 \end{array} \quad \begin{array}{c} 8421 \\ 1010 \end{array}$$

$$\text{BCD: } 93, ? ?$$

$$\times 5 - 3: 60, \cancel{9} ? 7$$

$$2421: ? 3, 8 ?$$

1)
$$\begin{array}{ccc} 8421 & 8421 & 8421 \\ 1011 & , & 1010 \end{array} \quad \begin{array}{c} 100 \\ 100 \end{array}$$

$$\text{BCD: } ? , ? 4$$

$$\times 5 - 3: 8, 71$$

$$2421: 5, ? 4$$