

Essay PTK1

No. _____

Date: _____

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Convert 78_{10} ke Hexadecimal (representasi singkat)

* Konvert ke biner

$$78/2 = 39, \text{ sisa } 0$$

$$39/2 = 19, \text{ sisa } 1$$

$$19/2 = 9, \text{ sisa } 1$$

$$9/2 = 4, \text{ sisa } 1$$

$$4/2 = 2, \text{ sisa } 0$$

$$2/2 = 1, \text{ sisa } 0$$

$$1/2 = 0, \text{ sisa } 1$$

hasil biner = 1001110_2

* Biner ke Hexadecimal

1001110

4 E

hasil hexadecimal = $4E_{16}$

Convert 10111000_2 ke dalam oktal (representasi singkat)

* Biner = 10111000_2

101111000

2 7 0

hasil = 270_8

3

Convert 56_8 ke dalam decimal

$$\begin{aligned} \text{Jawab} = & 6 \times 1 = 6 \\ & 5 \times 8 = 40 \\ & \quad \quad \quad + \\ & \quad \quad \quad 46 \end{aligned}$$

$$\text{hasil} = 46_{10}$$

4

Convert $7C_{16}$ ke dlm biner

$$\begin{aligned} \text{Jawab} = & 7 \rightarrow 0111 \\ & C \rightarrow 1100 \end{aligned} \left. \vphantom{\begin{aligned} 7 \rightarrow 0111 \\ C \rightarrow 1100 \end{aligned}} \right\} \text{gabungkan}$$

$$\text{hasil} = 1111100_2$$

5

Hitung operasi berikut dgn bine

$$a. 12_{10} + 20_{10}$$

$$b. 9_{10} - 3_{10}$$

$$c. 2_{10} \times 3_{10}$$

Jawab

$$a. 12_{10} \rightarrow 110_2$$

$$20_{10} \rightarrow 10100_2$$

$$\begin{array}{r} +12 \quad 110 \\ +20 \quad 10100 \\ \hline 10000 \end{array} +$$

$$\text{hasil} = 10000_2 \rightarrow 32_{10}$$

$$b. 9_{10} \rightarrow 1001_2$$

$$3_{10} \rightarrow 11_2$$

$$+3 \quad 0011$$

$$c'1 \quad 1100$$

$$c'2 \quad \begin{array}{r} 1 \\ \hline 1101 \end{array} +$$

* jumlahkan +g & c'2 3

$$+g \quad \begin{array}{r} 1 \quad 1 \\ 0 \quad 1001 \end{array}$$

$$-3 \quad \begin{array}{r} 1 \quad 1101 \\ \hline 0 \quad 0110 \end{array} +$$

$$\text{hasil} = 0110_2 \rightarrow 6_{10}$$

$$C. \quad 2_{10} \rightarrow 10_2$$

$$3_{10} \rightarrow 11_2$$

$$2 \quad 10$$

$$3 \quad \begin{array}{r} 11 \\ \hline 10 \end{array} \times$$

$$\begin{array}{r} 10 \\ \hline 110 \end{array} +$$

$$\text{hasil} = 110_2 \rightarrow 6_{10}$$