

Tugas Pola Pikir Digital

Nama : Hanif Ahmad Syamsi
NIM : 10121161
Kelas : IF-4

Soal :

1. $6A_{16} = \dots 8$

2. $1101011_2 = \dots 16$

3. $1101011_2 = \dots 8$

4. $3FE8_{16} = \dots 10$

5. $136_{10} = \dots 2$

6. $568 = \dots 10$

7. $228_{10} = \dots 8$

8. $11100_2 = \dots 10$

9. $BC5_{16} = \dots 2$

10. $434_{10} = \dots 16$

Jawaban :

1. $6A_{16} = 10$

0110 1010 \rightarrow konversi ke biner

001 101 010 \rightarrow kelompokkan menjadi 3

$1 + 5 + 2 = 152_8$

2. $6110 1011$

$2^3 2^2 2^1 2^0 \quad 2^3 2^2 2^1 2^0$

$= 6B$

$0+4+2+0 = 8+0+2+1$
 $6 \quad 11(B)$

3. $001 101 011 \rightarrow$ kelompokkan menjadi 3

$2^2 2^1 2^0 \quad 2^2 2^1 2^0 \quad 2^2 2^1 2^0 \rightarrow$ kalikan kelipatan berbasis 2

$001 401 021$

$1 \quad 5 \quad 3 = 153_8$

4. $3F2E8$

$16^3 \quad 16^2 \quad 16^1 \quad 16^0$

\rightarrow dikalikan kelipatan berbasis 16

$4096 \times 3 \quad 256 \times 15 \quad 16 \times 2 \quad 8 \times 1$

$12288 + 3840 + 32 + 8 = 16360_{10}$

$$\begin{array}{lcl}
 5. & 136 : 2 & = 68 \rightarrow 0 \\
 & 68 : 2 & = 34 \rightarrow 0 \\
 & 34 : 2 & = 17 \rightarrow 0 \\
 & 17 : 2 & = 8 \rightarrow 1 \\
 & 8 : 2 & = 4 \rightarrow 0 \\
 & 4 : 2 & = 2 \rightarrow 0 \\
 & 2 : 2 & = 1 \rightarrow 0 \\
 & & \rightarrow 1
 \end{array}$$

\rightarrow dibagi habis oleh 2

di hitung dari bawah ke atas

$$= 10001000_2$$

$$\begin{array}{lcl}
 6. & 5 & 6 \\
 & 8^1 & 8^0 \\
 & \rightarrow & \text{dikali kelipatan 2 berbasis 8} \\
 & 5 \times 8 & 6 \times 1 \\
 & 40 + 6 & = 46_{10}
 \end{array}$$

$$\begin{array}{lcl}
 7. & 228 : 8 & = 28 \rightarrow 4 \\
 & 28 : 8 & = 3 \rightarrow 4 \\
 & & \rightarrow 3
 \end{array}$$

\rightarrow dibagi habis oleh 8

di hitung dari bawah

$$= 344_8$$

$$\begin{array}{lcl}
 8. & 11100 & \\
 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\
 & 16 + 8 + 4 + 0 + 0 & = 28_{10}
 \end{array}$$

\rightarrow di kalikan kelipatan basis 2

$$\begin{array}{lcl}
 9. & B & C & 5 \\
 & 11 & 12 & 5 \\
 & 1011 & 1100 & 0101
 \end{array}$$

\rightarrow hasil sis2 bagi dari 2

$$= 10111100101_2$$

$$\begin{array}{lcl}
 10. & 434 : 16 & = 27 \rightarrow 2 \\
 & 27 : 16 & = 1 \rightarrow 11(B) \\
 & & \rightarrow 1
 \end{array}$$

\rightarrow 1

$$= 1B2_{16}$$