

40 pts

Name: _____

Class Day / Time: _____

Date: _____

Lab #1: The Simple Computer

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PART I - Base Conversion Worksheet

Convert the following numbers from decimal to the specified bases

1. $13_{10} =$ _____ (base 2 - binary)

2. $137_{10} =$ _____ (base 8 - octal)

3. $146_{10} =$ _____ (base 16 - hexadecimal)

Convert the following numbers to their decimal equivalents:

4. $10111_2 =$ _____ (base 10)

5. $1327_8 =$ _____ (base 10)

6. $1A3C_{16} =$ _____ (base 10)

PART 2 – Arithmetic Worksheet

Solve the following problems in the appropriate base.

$$\begin{array}{r} 1. \quad 246_8 \\ \quad + 65_8 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 10111_2 \\ \quad + 1011_2 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 3256_8 \\ \quad - 347_8 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 110001_2 \\ \quad - 11011_2 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 9A48_{16} \\ \quad + 175C_{16} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad E34B_{16} \\ \quad - 7AF_{16} \\ \hline \end{array}$$