

CS1203

Assignment 2

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“I warrant that his is my own work”

$$\begin{array}{r}
 1. \quad 99999 \\
 + 10678 \\
 \hline
 99327 \\
 +) \\
 \hline
 \underline{\underline{99322}}
 \end{array}$$

$$\begin{array}{r}
 2. \quad 99999 \\
 - 35090 \\
 \hline
 64009 \\
 - \quad 1 \\
 \hline
 \underline{\underline{64010}}
 \end{array}$$

$$3. \quad 90679 - 1 = 90678$$

$$99999 - x = 90678$$

$$99999 - 90678 = x$$

$$\begin{array}{r}
 99999 \\
 - 90678 \\
 \hline
 \underline{\underline{10121}}
 \end{array}$$

$$4. \quad 99999 - 47899 = x$$

$$\begin{array}{r}
 99999 \\
 - 47899 \\
 \hline
 \underline{\underline{52100}}
 \end{array}$$

5.

6. -112 ($64+32+16$)

$$\begin{array}{r}
 01110000 \\
 \downarrow \text{1's comp} \\
 10001111 \\
 + \\
 \hline
 2\text{s comp } 10010000
 \end{array}$$

7. 109 ($64+32+8+4+1$)

$$\begin{array}{r}
 01101101 \\
 \downarrow \text{1's comp} \\
 10010010 \\
 + 1 \\
 \hline
 2\text{s comp } 10010011
 \end{array}$$

8. 11001000

$$\begin{array}{r}
 11001000 \\
 - 1 \\
 \hline
 11001001
 \end{array}$$

$$\begin{array}{r}
 \downarrow \\
 -00110110 \\
 \begin{array}{l} 2 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ \downarrow \end{array} \\
 -63
 \end{array}$$

9. 01101100

$$\begin{array}{r}
 01101100 \\
 - 1 \\
 \hline
 01101011
 \end{array}$$

$$\begin{array}{r}
 \downarrow \\
 00010010 \\
 \begin{array}{l} 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ \downarrow \end{array} \\
 18
 \end{array}$$

10.

11.

12.