

4.7  $x - y = x + (y_{2k}) = x + (y_k) + 1 = (x + (y \oplus FF_{16}) + 1)$

a)  $\begin{matrix} x & & - & & y \\ (0111110)_2 & - & (01010000)_2 \end{matrix}$

$$x - y = x + y_k + 1$$

$$y_k = 1010111$$

$$\begin{array}{r} \overset{1}{0} \overset{1}{1} \overset{1}{1} \overset{1}{1} \overset{1}{1} \overset{1}{1} 0 \\ 1010111 \\ + \\ \hline 1 \{ 0010110 \end{array}$$

$$C = 0$$

$$Z = 0$$

b)  $(01010000) - (0111111)_2$

$$x - y = x + y_{2k} = x + y_k + 1 = x + (y \oplus FF_{16}) + 1$$

$$y_k = 10000001$$

$$\begin{array}{r} \phantom{0} 1 \\ 01010000 \\ 10000001 \\ + \\ \hline (110)0010 \end{array}$$

$$C = 1$$

$$Z = 0$$

c)  $1101110 - 00100010$

$$= 1101110 + 11011101 + 1$$

$$\begin{array}{r} \phantom{1} 1 \phantom{1} 1 \phantom{1} 1 \\ 1101110 \\ 11011101 \\ + \\ \hline 1 \{ 1011100 \end{array}$$

$$C = 0$$

$$Z = 0$$