

$\begin{array}{r} 0010 = 2 \\ +\underline{1001} = -7 \\ \hline 1011 = -5 \end{array}$ <p>(a) $M = 2 = 0010$ $S = 7 = 0111$ $-S = 1001$</p>	$\begin{array}{r} 0101 = 5 \\ +\underline{1110} = -2 \\ \hline \underline{1}0011 = 3 \end{array}$ <p>(b) $M = 5 = 0101$ $S = 2 = 0010$ $-S = 1110$</p>
$\begin{array}{r} 1011 = -5 \\ +\underline{1110} = -2 \\ \hline \underline{1}1001 = -7 \end{array}$ <p>(c) $M = -5 = 1011$ $S = 2 = 0010$ $-S = 1110$</p>	$\begin{array}{r} 0101 = 5 \\ +\underline{0010} = 2 \\ \hline 0111 = 7 \end{array}$ <p>(d) $M = 5 = 0101$ $S = -2 = 1110$ $-S = 0010$</p>
$\begin{array}{r} 0111 = 7 \\ +\underline{0111} = 7 \\ \hline 1110 = \text{Overflow} \end{array}$ <p>(e) $M = 7 = 0111$ $S = -7 = 1001$ $-S = 0111$</p>	$\begin{array}{r} 1010 = -6 \\ +\underline{1100} = -4 \\ \hline \underline{1}0110 = \text{Overflow} \end{array}$ <p>(f) $M = -6 = 1010$ $S = 4 = 0100$ $-S = 1100$</p>

Figure 9.4 Subtraction of Numbers in Twos Complement Representation (M - S)