

$$\begin{array}{r}
 \begin{array}{c} \text{1} \\ 0007 \end{array} + \begin{array}{c} \text{1} \\ 0000\ 0000\ 0000\ 0111 \end{array} \begin{array}{c} (+) \\ (+) \end{array} \\
 \hline
 \begin{array}{c} 0009 \\ 0010 \end{array} + \begin{array}{c} 0000\ 0000\ 0000\ 1001 \\ 0000\ 0000\ 0001\ 0000 \end{array} \begin{array}{c} (+) \\ (+) \end{array} \quad \text{No overflow} \\
 \hline
 \text{No carry} \rightarrow \text{saturated and modular}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \text{1} \\ 6BA6 \end{array} + \begin{array}{c} \text{1111} \\ 0110\ 1011\ 1010\ 0110 \end{array} \begin{array}{c} (+) \\ (-) \end{array} \\
 \hline
 \begin{array}{c} 992D \\ 04D3 \end{array} + \begin{array}{c} 1001\ 1001\ 0010\ 1101 \\ 0000\ 0100\ 1101\ 0011 \end{array} \begin{array}{c} (-) \\ (+) \end{array} \quad \text{No overflow} \\
 \hline
 \text{No carry} \rightarrow \text{saturated and modular}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \text{1} \\ 03BB \end{array} + \begin{array}{c} \text{1111} \\ 0000\ 0011\ 1011\ 1011 \end{array} \begin{array}{c} (+) \\ (+) \end{array} \\
 \hline
 \begin{array}{c} 0101 \\ 04BC \end{array} + \begin{array}{c} 0000\ 0001\ 0000\ 0001 \\ 0000\ 0100\ 1011\ 1100 \end{array} \begin{array}{c} (+) \\ (+) \end{array} \quad \text{No overflow} \\
 \hline
 \text{No carry} \rightarrow \text{saturated and modular}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \text{1} \\ B1EB \end{array} + \begin{array}{c} \text{1111} \\ 1011\ 0001\ 1110\ 1011 \end{array} \begin{array}{c} (-) \\ (-) \end{array} \\
 \hline
 \begin{array}{c} C42B \\ 7616 \end{array} + \begin{array}{c} 1100\ 0100\ 0010\ 1011 \\ 0111\ 0110\ 0001\ 0110 \end{array} \begin{array}{c} (-) \\ (+) \end{array} \quad \boxed{\text{yes overflow}} \quad \boxed{\text{saturation} = 8000} \\
 \hline
 \text{yes carry} \uparrow \quad \text{negative} + \text{negative} = \text{positive!} \rightarrow \text{modular}
 \end{array}$$