

i)

$$\begin{array}{r}
 212 \\
 \times 122 \\
 \hline
 1201 \\
 12010 \\
 21200 \\
 \hline
 112111
 \end{array}$$

$$(212)_3 \times (122)_3 = (112111)_3$$

ii)

$$\begin{array}{r}
 40122 \\
 - 255 \\
 \hline
 1132 \\
 - 1131 \\
 \hline
 1
 \end{array}$$

$$\begin{array}{r}
 1126 \\
 \hline
 260
 \end{array}$$

$$(126)_7 \times (260)_7 + (12)_7 = (40122)_7$$

iii)

$$\begin{array}{r}
 101101 \\
 \times 11001 \\
 \hline
 101101
 \end{array}$$

$$\begin{array}{r}
 101101 \\
 101101 \\
 \hline
 10001100101
 \end{array}$$

$$\begin{array}{r}
 10011001 \\
 - 1011 \\
 \hline
 010000 \\
 - 1011 \\
 \hline
 010101 \\
 - 1011 \\
 \hline
 1010
 \end{array}$$