$$
\begin{array}{r}
1\ 1 \\
\times\ 1\ 2 \\
\hline
2\ 2 \\
1\ 1 \\
\hline
1\ 3\ 2
\end{array}
$$

a) Decimal

$$
\begin{array}{r}
1\ 0\ 1\ 1 \\
\times\ 1\ 1\ 0\ 0 \\
\hline
0\ 0\ 0\ 0 \\
0\ 0\ 0\ 0 \\
1\ 0\ 1\ 1 \\
1\ 0\ 1\ 1 \\
\hline
1\ 0\ 0\ 0\ 0\ 1\ 0\ 0
\end{array}
$$

b) Binary

$$
\begin{array}{cccccccc}
 & & & & & a_3 & a_2 & a_1 & a_0 \\
 & & & & \times & b_3 & b_2 & b_1 & b_0 \\
\hline
 & & & & & a_3b_0 & a_2b_0 & a_1b_0 & a_0b_0 \\
 & & & a_3b_1 & & a_2b_1 & a_1b_1 & a_0b_1 & \\
 & & a_3b_2 & a_2b_2 & & a_1b_2 & a_0b_2 & & \\
 & a_3b_3 & a_2b_3 & a_1b_3 & & a_0b_3 & & & \\
\hline
p_7 & p_6 & p_5 & p_4 & & p_3 & p_2 & p_1 & p_0
\end{array}
$$

c) Implementation