

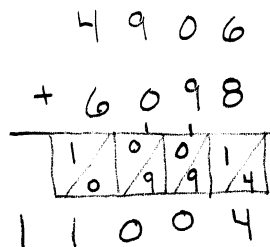
Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) Use a different nontraditional algorithm to compute each sum.

(a) $4906 + 6098$

LATTICE ADDITION

11,004



(b) $534 + 87$

PARTIAL SUMS

$$\begin{array}{r}
 534 \\
 + 87 \\
 \hline
 11 \\
 110 \\
 500 \\
 \hline
 \end{array}$$

Sum is 621

2. (1 point) Use any algorithm to $343_{\text{five}} + 423_{\text{five}} + 434_{\text{five}}$.

$$\begin{array}{r}
 \cancel{2} \cancel{4} 3 \\
 4 2 \cancel{1} \\
 + \cancel{4} \cancel{3} \cancel{4} \\
 \hline
 2310_{\text{FIVE}}
 \end{array}$$

3. (1 point) Use a nontraditional algorithm to compute $678 - 374$.

$$\begin{array}{r}
 678 + 6 \\
 - 374 + 6 \\
 \hline
 \end{array}
 \rightarrow
 \begin{array}{r}
 684 + 20 \\
 - 380 + 20 \\
 \hline
 \end{array}
 \rightarrow
 \begin{array}{r}
 704 \\
 - 400 \\
 \hline
 304
 \end{array}$$

4. (1 point) Use the equal additions algorithm to compute $421_{\text{six}} - 243_{\text{six}}$.

$$\begin{array}{r}
 421_{\text{six}} + 3 \\
 - 243_{\text{six}} + 3 \\
 \hline
 \end{array}
 \rightarrow
 \begin{array}{r}
 424_{\text{six}} + 10_{\text{six}} \\
 - 250_{\text{six}} + 10_{\text{six}} \\
 \hline
 \end{array}
 \rightarrow
 \begin{array}{r}
 434_{\text{six}} \\
 - 300_{\text{six}} \\
 \hline
 134_{\text{six}}
 \end{array}$$