

Base 5 Addition and Subtraction Worksheet

Name: Solutions

Date: _____

Instructions: Solve the following problems using all of your available methods. For addition, you should practice using base 5 blocks, the standard algorithm, the left to right method, and the lattice method. For subtraction, you should practice using base 5 blocks, the standard algorithm, and the equal addition method.

1. $132_{\text{five}} + 143_{\text{five}}$

2. $1342_{\text{five}} + 2211_{\text{five}}$

3. $3324_{\text{five}} + 4214_{\text{five}}$

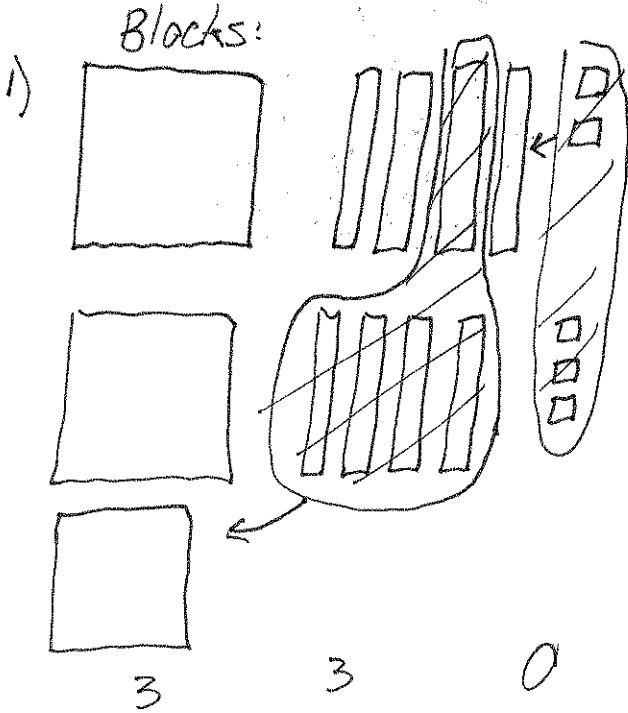
4. $3014_{\text{five}} + 1332_{\text{five}}$

5. $203_{\text{five}} - 132_{\text{five}}$

6. $4314_{\text{five}} - 1402_{\text{five}}$

7. $2213_{\text{five}} - 1342_{\text{five}}$

8. $3102_{\text{five}} - 1103_{\text{five}}$



Standard:

$$\begin{array}{r} 132 \\ + 143 \\ \hline 330 \end{array}$$

$\leftarrow 2+3=10$

$\leftarrow 1+3+4=13$

Left to Right:

$$\begin{array}{r} 132 \\ + 143 \\ \hline 200 \\ 120 \\ + 10 \\ \hline 330 \end{array}$$

Lattice:

1	3	2
+	1	4
3	3	0

2) Standard:

$$\begin{array}{r} 11 \\ 1342 \\ + 2211 \\ \hline 4103 \end{array}$$

Left to Right:

$$\begin{array}{r} 1342 \\ + 2211 \\ \hline 3000 \\ 1000 \\ 100 \\ + 3 \\ \hline 4103 \end{array}$$

Lattice:

1	3	4	2
+	2	2	1
4	1	0	3

3) Standard:

$$\begin{array}{r} \overset{1}{3} \overset{1}{3} 24 \\ + 4214 \\ \hline 13043 \end{array}$$

Left to Right:

$$\begin{array}{r} 3324 \\ + 4214 \\ \hline 12000 \\ 1000 \\ 30 \\ + 13 \\ \hline 13043 \end{array}$$

Lattice:

$$\begin{array}{r} 3324 \\ + 4214 \\ \hline \begin{array}{|c|c|c|c|} \hline 1 & 2 & 0 & 3 \\ \hline \end{array} \\ 13043 \end{array}$$

4) Standard:

$$\begin{array}{r} \overset{1}{3} \overset{1}{0} 14 \\ + 1332 \\ \hline 4401 \end{array}$$

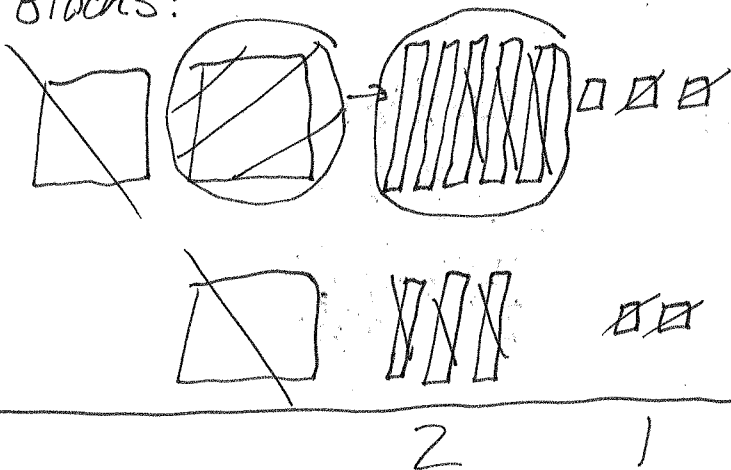
Left to Right:

$$\begin{array}{r} 3014 \\ + 1332 \\ \hline 4000 \\ 300 \\ 40 \\ + 11 \\ \hline 4000 \\ 300 \\ 100 \\ + 1 \\ \hline 4401 \end{array}$$

Lattice:

$$\begin{array}{r} 3014 \\ + 1332 \\ \hline \begin{array}{|c|c|c|c|} \hline 0 & 4 & 3 & 4 \\ \hline \end{array} \\ 4401 \end{array}$$

5) Blocks:



Standard:

$$\begin{array}{r} \overset{1}{2} \overset{10}{03} \\ - 132 \\ \hline 21 \end{array}$$

Equal Additions:

$$\begin{array}{r} 203 + 20 \rightarrow 223 \\ - 132 + 20 \rightarrow -202 \\ \hline 21 \end{array}$$

6) Standard:

$$\begin{array}{r} 313 \\ 4814 \\ -1402 \\ \hline 2412 \end{array}$$

Equal Additions:

$$\begin{array}{r} 4314 + 100 \\ -1402 + 100 \\ \hline \end{array} \rightarrow \begin{array}{r} 4414 \\ -2002 \\ \hline 2412 \end{array}$$

7) Standard:

$$\begin{array}{r} 223 \\ 2283 \\ -1342 \\ \hline 321 \end{array}$$

Equal Additions:

$$\begin{array}{r} 2213 + 10 \\ -1342 + 10 \\ \hline \end{array} \rightarrow \begin{array}{r} 2223 + 100 \\ -1402 + 100 \\ \hline \end{array} \rightarrow \begin{array}{r} 2323 \\ -2002 \\ \hline 321 \end{array}$$

8) Standard:

$$\begin{array}{r} 204 \\ 3008 \\ -1103 \\ \hline 1444 \end{array}$$

Equal Additions:

$$\begin{array}{r} 3102 + 2 \\ -1103 + 2 \\ \hline \end{array} \rightarrow \begin{array}{r} 3104 + 40 \\ -1110 + 40 \\ \hline \end{array} \rightarrow \begin{array}{r} 3144 + 300 \\ -1200 + 300 \\ \hline \end{array} \rightarrow \dots$$

$$\dots \rightarrow \begin{array}{r} 3444 \\ -2000 \\ \hline 1444 \end{array}$$