Problem of the Week
Problem E
Arranging Tiles 3

Eliana has a box of tiles, each with an integer from 0 to 9 on it. Each integer appears on at least three tiles. Eliana creates larger numbers by placing tiles side by side. For example, using the tiles 3 and 7, Eliana can create the 2-digit number 37 or 73.

3 7   7 3

Using six of her tiles, Eliana forms two 3-digit numbers, ABC and DEF, that add to 1234.

$$
\begin{array}{r}
A\,B\,C \\
+\ D\,E\,F \\
\hline
1\ 2\ 3\ 4
\end{array}
$$

Eliana then notices that $A > D$, $B > E$, and $C > F$. How many possible 6-tuples $(A,\ B,\ C,\ D,\ E,\ F)$ could she have chosen?