A 6-cycle system \((X, C)\) is said to be almost 2-perfect if it is possible to place a 6-cycle inside each 6-cycle in \(C\) so that the resulting collection of 6-cycles is a 6-cycle system. Not too surprisingly sometimes this is possible and sometimes its not. For example the 6-cycle system \((X, C_1)\) is almost 2-perfect.

\[
C_1 = \begin{cases} 
(0,1,2,3,4,5) \rightarrow (0,2,4,1,5,3) \\
(0,2,4,1,6,7) \rightarrow (0,4,6,2,7,1) \\
(0,3,7,8,4,6) \rightarrow (0,7,4,3,6,8) \\
(0,8,6,5,7,4) \rightarrow (0,6,7,8,4,5) \\
(1,7,2,8,5,3) \rightarrow (1,2,5,7,3,8) \\
(1,8,3,6,2,5) \rightarrow (1,3,2,8,5,6) 
\end{cases}
\]

The 6-cycle system \((X, C_2)\) is not!

\[
C_2 = \begin{cases} 
(0,1,2,3,4,5) \\
(0,2,4,1,3,6) \\
(0,3,5,1,7,8) \\
(0,4,6,8,2,7) \\
(1,6,5,7,3,8) \\
(2,5,8,4,7,6) 
\end{cases}
\]

This is an elementary survey showing that the spectrum for almost 2-perfect 6-cycle systems is the set of all \(n \equiv 1\) or \(9\) (mod 12), (= the spectrum for 6-cycle systems). This can be extended to maximum packings.