



(W)holy Numbers

A church hymn book contains 700 hymns, numbered 1 to 700. Each Sunday the people in church sing four different hymns.

The numbers of the hymns are displayed to them in a frame by dropping in single-digit boards, like this one.



The board for 6 may be turned upside down to serve as a 9.

What is the minimum number of small boards that is needed to show any possible combination of four hymn numbers?

Thousands more problems can be found on the NRICH Maths website:

www.nrich.maths.org