

The A368138(2) = 154 ways of tiling the 2×2 torus by tiles in

$$\left\{ \begin{array}{c} \text{[square with black bottom-left triangle]}, \\ \text{[square with black top-left triangle]}, \\ \text{[square with white bottom-left triangle]}, \\ \text{[square with black top-right triangle]}, \\ \text{[square with white top-right triangle]}, \\ \text{[square with black bottom-right triangle]}, \\ \text{[square with white bottom-right triangle]} \end{array} \right\}$$

up to the symmetries of the square:











