1. Q — Number of binary strings of length n with no isolated ones.

   A — Let $S(n)$ be the desired number.

   $S(0) = 1, \{''\}$

   $S(1) = 1, \{0\}$

   $S(2) = 2, \{00, 11\}$

   $S(3) = 4, \{000, 011, 110, 111\}$

   $S(4) = 7, \{0000, 0011, 0110, 1100, 0111, 1110, 1111\}$

   $S(5) = 12, \{00000, 00011, 00110, 01100, 11000, 00111, 01110, 11100, \mathbf{01111, 11110, 11011,} 11111\}$

   The strings in bold are courtesy of Cristian!. And we can establish that:

   $\boxed{\text{S(n)=S(n-1)+S(n-2)+S(n-4)}}$