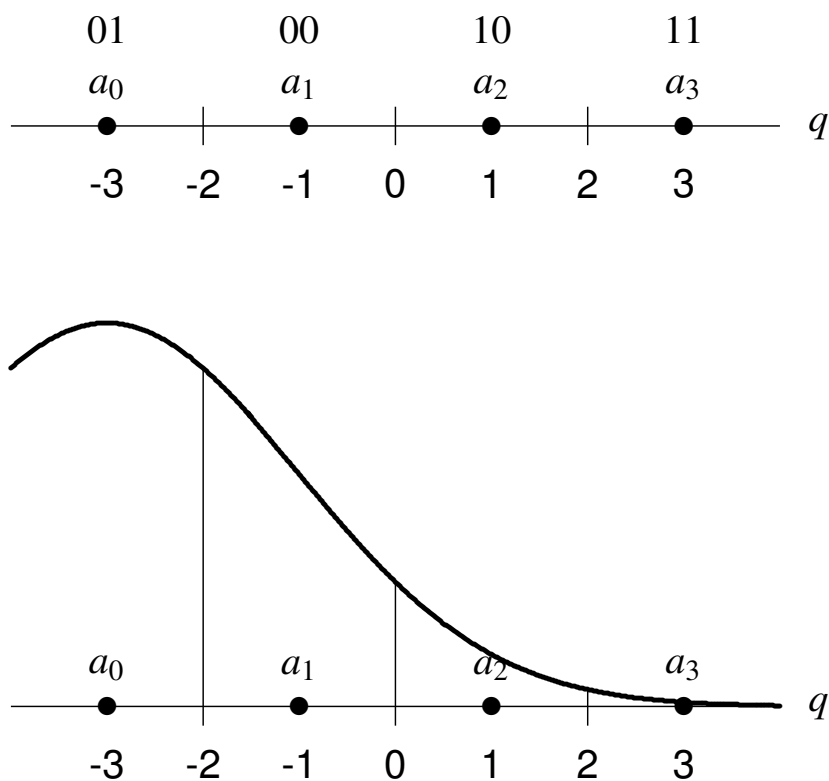


Cálculo de la BER



Codificación de Gray

The figure consists of two parts. The top part shows a horizontal axis labeled q with tick marks at -3, -2, -1, 0, 1, 2, and 3. Four points are marked on the axis: a_0 at -3, a_1 at -1, a_2 at 1, and a_3 at 3. Above the axis, the bit pairs 01, 00, 10, and 11 are aligned with a_0, a_1, a_2, a_3 respectively.

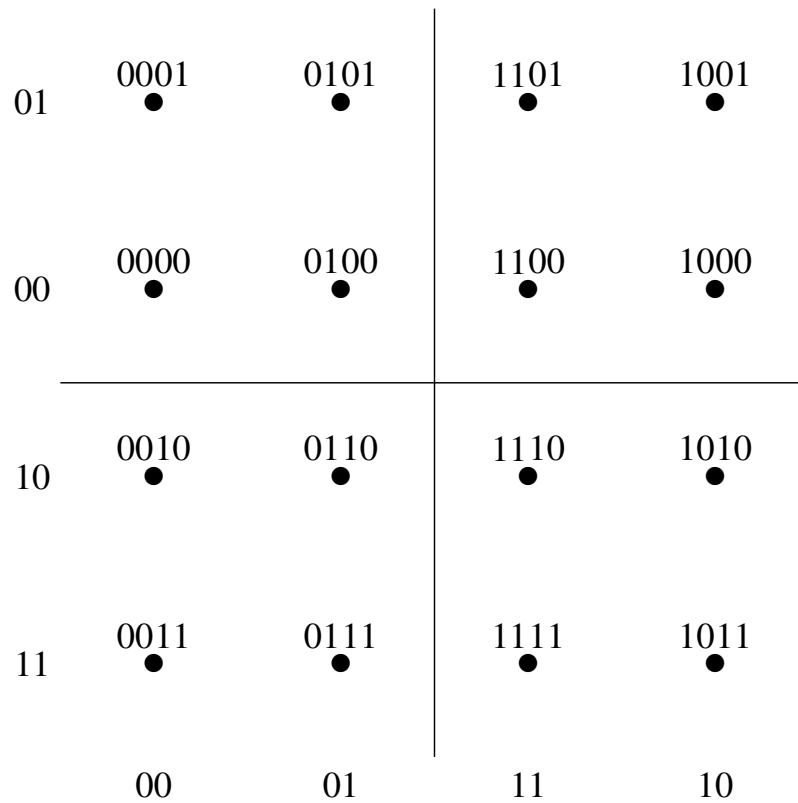
The bottom part shows the same horizontal axis and points. Above the axis, the bit pairs 11, 00, 10, and 01 are aligned with a_0, a_1, a_2, a_3 respectively.

Below the diagrams is the BER equation for the Gray-coded signal:

$$BER = \frac{3}{4}Q\left(\frac{1}{\sqrt{N_o/2}}\right) + \frac{1}{2}Q\left(\frac{3}{\sqrt{N_o/2}}\right) - \frac{1}{4}Q\left(\frac{5}{\sqrt{N_o/2}}\right)$$

$$BER = \frac{5}{4}Q\left(\frac{1}{\sqrt{N_o/2}}\right) - \frac{1}{4}Q\left(\frac{3}{\sqrt{N_o/2}}\right)$$

Codificación Gray QAM



Codificación Gray PSK

