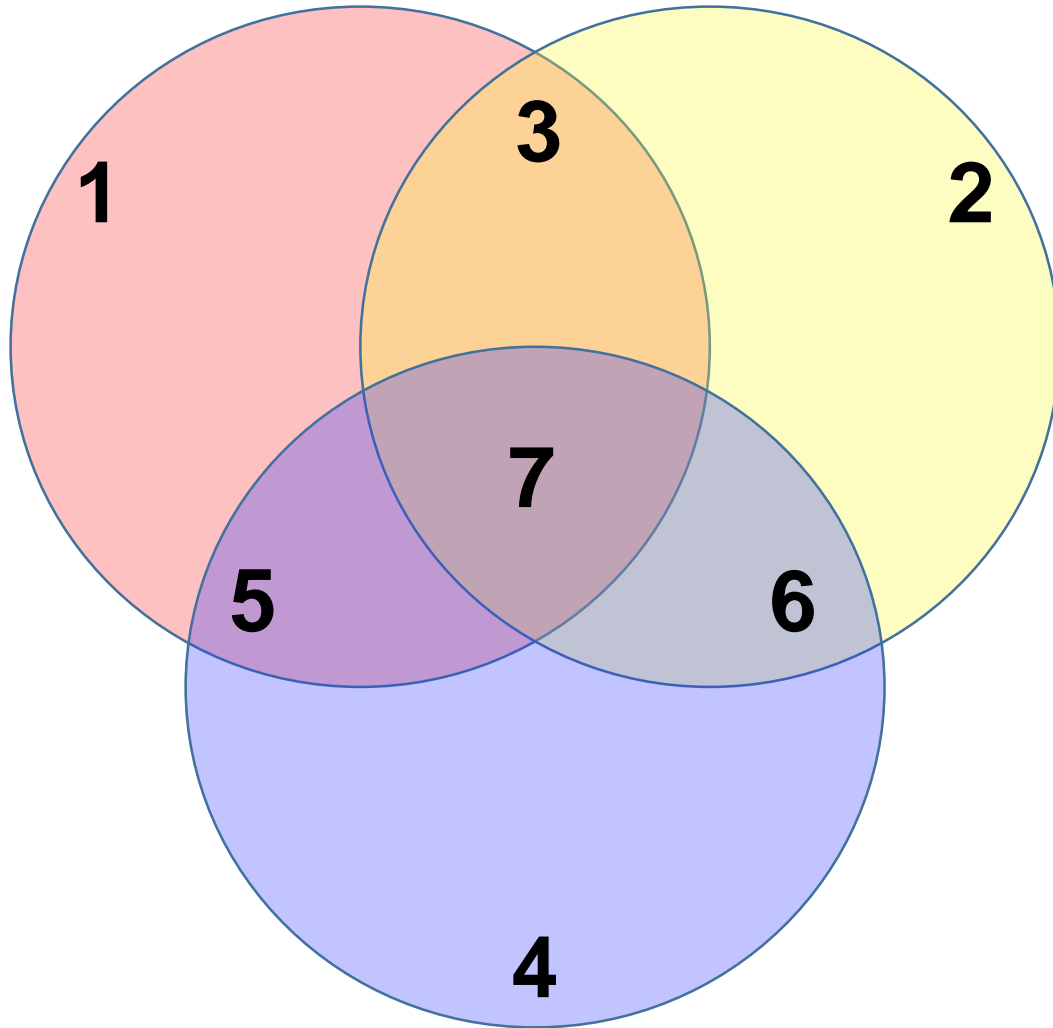


Graphical view of the (7,4) Hamming Code



To find parity bits:

- Write data bits into areas 7, 6, 5, and 3.
- Choose bit for area 4 such that the blue circle has even parity.
- Do the same for the yellow and red circles.

To check parity bits:

- Check that each circle has even parity.

To correct an error:

- Find the circles with odd parity.
- Flip the bit in the area corresponding the intersection of those circles.

This approach generalizes, but one needs $(N-1)$ -dimensional hyperspheres for N parity bits.