

Map Manipulation

or

The Roundup

Your job is to lasso the strays...

1. Map all prime implicants. A prime implicant is a product term with the maximum number of 2^n adjacent minterms
2. Identify the “stray doggies.” A stray doggie is a minterm mapped by only one prime implicant.
3. Write “essential” prime implicants. An essential prime implicant maps a stray doggie.
4. Identify the “herd” – minterms not mapped by an essential prime implicant.
5. Map prime implicants covering remaining minterms
6. Write function for each mapping.

Selection Rule: Minimize the overlap among prime implicants as much as possible. Make sure that each prime implicant selected includes at least one minterm not included in any other prime implicant selected.