Assignment 1 — FPGA Lab

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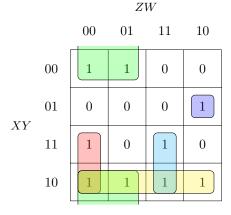
1 Question

Reduce the following Boolean expression to its simplest form using K-Map

$$F(X, Y, Z, W) = \sum(0, 1, 6, 8, 9, 10, 11, 12, 15) \tag{1}$$

2 Solution

Represent the given Boolean expression in K-Map and follow the K-Map rules to reduce the given Boolean form to simplest form

$$F(X, Y, Z, W) = \overline{YZ} + X\overline{Y} + X\overline{ZW} + XZW + \overline{X}YZ\overline{W} \tag{2}$$