1. Simplify the following Boolean functions using K-map.

   i. $F(x,y) = \sum(0,1,2,3)$

   ii. $F(x,y) = \sum(0,1,2)$

   iii. $F(a,b) = \sum(0,1)$

   iv. $F(y_1,y_2) = \sum(0,3)$

   v. $F(x_1,y_1) = \sum(1)$

   vi. $F(a,b) = \sum(1,2)$

   vii.