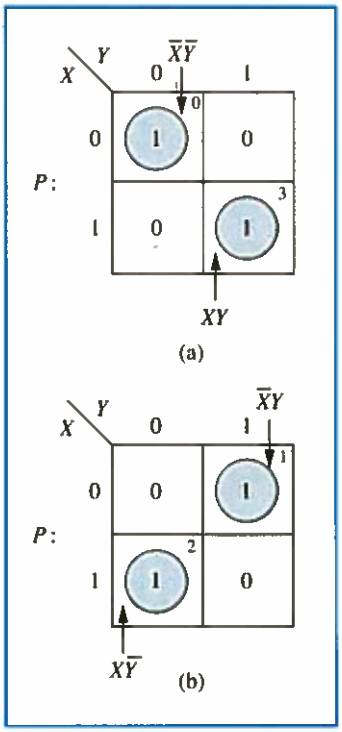

Figure 3–45
Nonadjacent 1-cells.

two adjacent 1-cells, and since the variable X remains the same (1) in both cells, the logic equation for the K-map is

$$P = X$$

Notice in the K-map shown in Figure 3–46b that the variable X also remains the same in both cells but its value is a 0. Therefore the logic equation for the K-map is

$$P = \overline{X}$$

In Figure 3–46c, the variable Y remains constant in both adjacent 1-cells, therefore the equation is

$$P = Y$$

Similarly in Figure 3–46d, the variable $\overline{Y}$ remains constant in both adjacent 1-cells (since its value is 0) and therefore the equation for the K-map is

$$P = \overline{Y}$$

In K-maps where there are more than one set of adjacent 1's we must *OR* the variables obtained from each set. For example, in Figure 3–47a since adjacent cells no. 1 and no. 3 produce the variable Y, and adjacent cells no. 2 and no. 3 produce the variable X, the logic equation for the K-map is

$$P = X + Y$$

Similarly, for the K-map in Figure 3–47b

$$P = \overline{X} + Y$$