

[41] With these conditions the system of equations becomes

$$x + y = 3000$$

$$0.10x + 0.10y = 264.$$

Solving each equation for y provides the following results.

$$y = 3000 - x$$

$$y = 2640 - x$$

Graphs of $Y_1 = 3000 - X$ and $Y_2 = 2640 - X$ are shown in *Figure 41*. Notice that their graphs are parallel lines with slopes of -1 that do not intersect. There is no solution. This means that there is no way to have two loans totaling \$3,000, both with an interest rate of 10%, and only pay \$264 in interest each year. The interest must be 10% of \$3000 or \$300. This system of equations is inconsistent—there is no solution. Graphs of inconsistent systems in two variables consist of parallel lines.

[0, 3000, 1000] by [0, 3000, 1000]

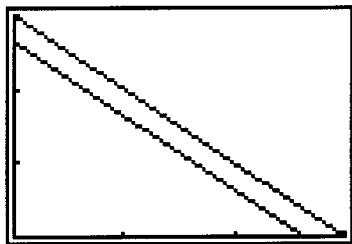


Figure 41