

Compare and contrast the solution set to the homogenous system  $\begin{cases} x_1 - 2x_2 = 0 \\ -2x_1 + 4x_2 = 0 \end{cases}$  with the

solution set to the nonhomogeneous system  $\begin{cases} x_1 - 2x_2 = -6 \\ -2x_1 + 4x_2 = 12 \end{cases}$ . State all solution sets as vector

equations and state the solution set to the nonhomogeneous system twice, the second time changing the shift vector relative to the first statement of the solution set. Finally, graph the solution sets and illustrate the shifting effect between the solution sets.

