Last name _____

First name _____

LARSON—OPER 731—CLASSROOM WORKSHEET 07
Theorem of the Alternatives

1. Show that the following system is *in*feasible:

$$x_1 + x_2 \leq 1$$

$$x_1 - x_2 \leq -2$$

$$x_1 \geq 0$$

$$x_2 \geq 0.$$

2. Show that the following system is feasible:

$$y_1 + y_2 - y_3 = 0$$

$$y_1 - y_2 - y_4 = 0$$

$$y_i \geq 0$$

$$y_1 - 2y_2 < 0$$