MATH 134A Review: System of Linear Equations

Facts to Know

A system of linear equations with two equations and two variables is

$$\left\{ \right.$$

The corresponding matrix equation is

A solution is

A method to find a solution is

Recall the inverse of a 2×2 matrix is

Examples

1. A restaurant manager wants to purchase 200 sets of dishes. One design costs $25 per set, while another costs $45 per set. If she only has $7400 to spend, how many of each design should be ordered?

2. A movie theater charges $9.00 for adults and $7.00 for senior citizens. On a day when 325 people paid an admission, the total receipts were $2495. How many who paid were adults? How many were seniors?