Quiz #1
MATH 166
Due 1-24-2007

1. A theatre charges $5.00 for adults and $2.50 for children. The theatre sold 400 tickets and brought in $1750 in revenue. Set up the system of equations to solve this problem. (2 points)

2. (1 point each) 
   \[ A = \begin{bmatrix} -1 & 2 \\ 3 & -3 \\ 4 & 5 \end{bmatrix} \quad B = \begin{bmatrix} 1 & 4 & -3 \\ 3 & 2 & 5 \\ -3 & -2 & -1 \end{bmatrix} \quad C = \begin{bmatrix} -4 & 9 & 22 \\ -2 & -3 & 6 \end{bmatrix} \]
   
   (a) What is the size of \( AB \)?
   
   (b) What is the size of \( BA \)?
   
   (c) What is the size of \( A^T C \)?
   
   (d) Find \( A + B \).
   
   (e) Find \( A \ast B \).
   
   (f) Find \( A \ast C \).
   
   (g) Find \( A^T \ast B \).
   
   (h) Find \( B \ast A \).