Matrices lesson 7 - Solving matrix equations

Magic Monk Tutorials

1 Rearrange for the square matrix X, where all other matricies are also square.

e.g. $AX = B$ solved for X is $X = A^{-1}B$

1.1 $XA = B$

1.2 $A(X + B) = C$

1.3 $AXB = C$

1.4 $AX + BX = C$ **(remember the distributitive law)**

2 Solve for X in the following, given matrices A, B, and C.

$A = \begin{pmatrix} 2 & 1 \\ 7 & 4 \end{pmatrix}$, $B = \begin{pmatrix} 3 & 2 \\ 7 & 5 \end{pmatrix}$, $C = \begin{pmatrix} 1 & 1 \\ 3 & 4 \end{pmatrix}$

2.1 $AX = B$

2.2 $XA = B$

2.3 $XB = A$

2.4 $AXB = C$