/6 points total

QUIZ 1

MATH 4242 010, AU'14

Please write your **name on the top left** and show all work legibly.

Problem 1. Let $\mathbf{A} = \begin{pmatrix} 1 & 0 & 2 \\ 3 & -1 & 0 \end{pmatrix}$ and $\mathbf{B} = \begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}$.

(a) What are the sizes of **A** and **B**? (Answers should be of the form $m \times n$ for each.)

A is 2×3 +1

B is 2×2 +1

(b) Is **AB** defined? If it is, compute it. If it isn't, say why.

No. +1 The # of columns of A (3) must be the number of columns of B. +1

(c) Is **BA** defined? If it is, compute it. If it isn't, say why.

Yes. +1

$\begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}\begin{pmatrix} 1 & 0 & 2 \\ 3 & -1 & 0 \end{pmatrix} = \begin{pmatrix} 7 & -2 & 2 \\ 3 & -1 & 0 \end{pmatrix}$ +1

2×2 2×3 2×3

☺

columns of B = # rows of A