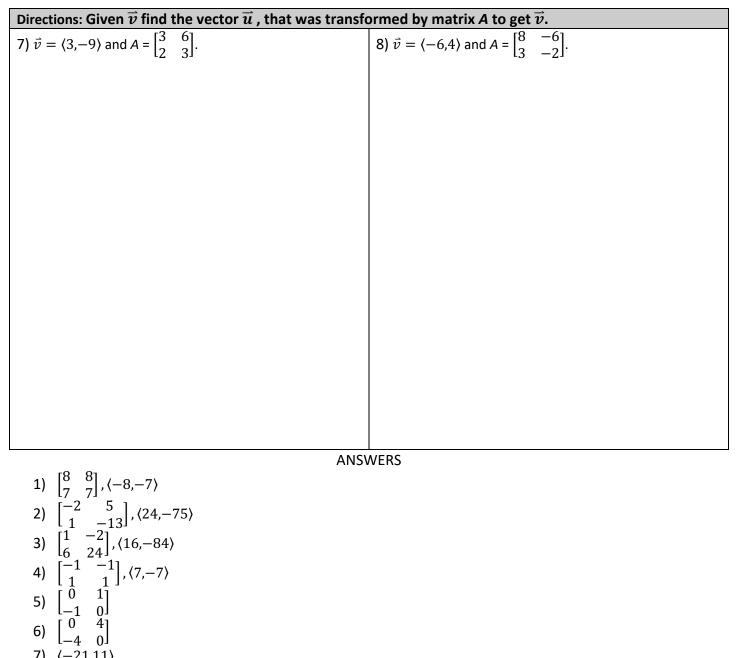
4.13B Matrices as Functions

AP Precalculus

Name: _____

composition of the function and then find the vector at 1) Find the associated matrix and $T(U(\vec{v}))$.	2) Find the associated matrix and $U(T(\vec{v}))$.
$A = \begin{bmatrix} 2 & 1 \\ 1 & 2 \end{bmatrix}, B = \begin{bmatrix} 3 & 3 \\ 2 & 2 \end{bmatrix}, \vec{v} = \langle -3, 2 \rangle$	$A = \begin{bmatrix} -1 & 4 \\ 0 & -3 \end{bmatrix}, B = \begin{bmatrix} 2 & 1 \\ -1 & 3 \end{bmatrix}, \vec{v} = \langle 3, 6 \rangle$
3) Find the associated matrix and $U(T(\vec{v}))$. $A = \begin{bmatrix} 2 & 4 \\ 3 & 2 \end{bmatrix}, B = \begin{bmatrix} -1 & 1 \\ 3 & 0 \end{bmatrix}, \vec{v} = \langle 6, -5 \rangle$	4) Find the associated matrix and $U(T(\vec{v}))$. $A = \begin{bmatrix} -1 & -1 \\ 1 & 1 \end{bmatrix}, B = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}, \vec{v} = \langle -5, -2 \rangle$
Directions: Find the associated matrix to the compositi 5) Rotation of $\frac{\pi}{2}$ radians counterclockwise and reflected in both x- and y-axes.	fon of transformations. 6) Horizontal and vertical dilation of 4, and a rotation of $\frac{3\pi}{2}$ radians counterclockwise.



- 7) (-21,11)
- 8) (18,25)