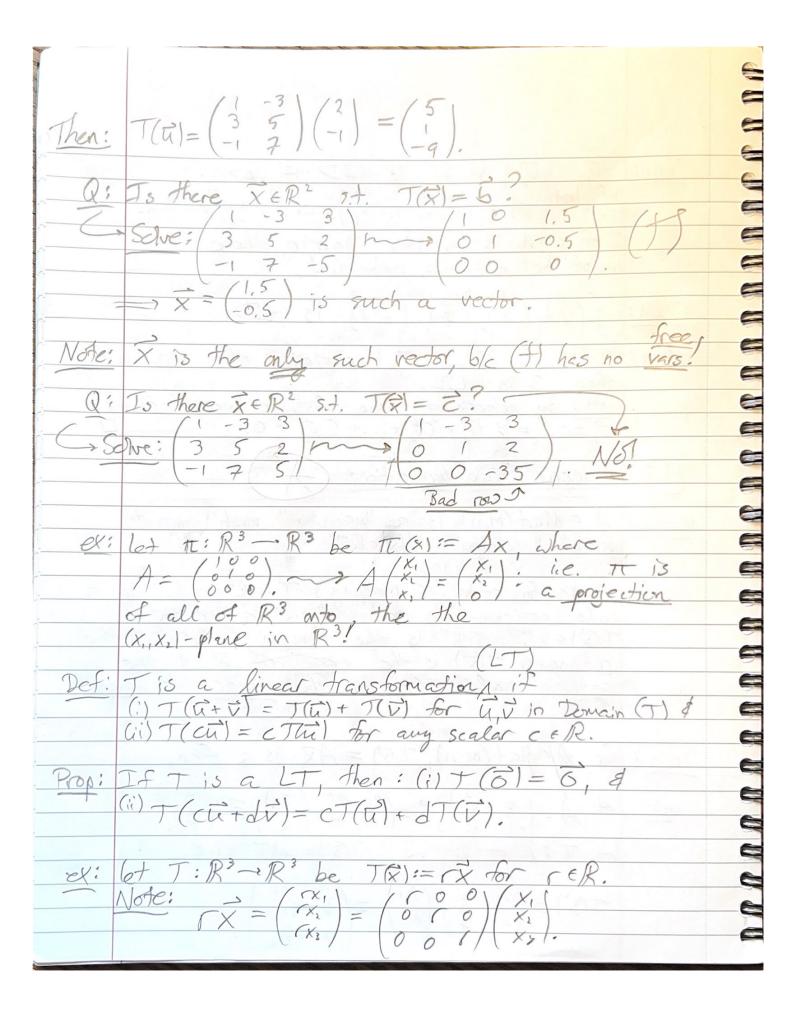
	9/19/24
1 /nm?	Dry Vos in 18 13 LD it p>n.
	Pf: let $A = (\vec{v}_1 \ \vec{v}_2 \dots \vec{v}_p)$ , an $n \times p$ matrix.
	If DEN is accept then a there
	If p>n is greater than n, there must be a free variable!
I exi	$\{(1), (2), (3), (5)\}$ 13 LD.
Taux:	Tf 5-5= 1 + 1 + 1 + 2 - 2 - 1 + 5
77000	If $S = \{\vec{v}_1, \dots, \vec{v}_p\}$ contains the zero vector, then $S$ is LD.  Pf: By recranging the list, we may assume $\vec{v}_1 = 0. \implies  \vec{v}_1 + 0\vec{v}_2 + \dots + 0\vec{v}_p = 6.$
	Pf: By regranging the list, we may assume
	$\vec{v}_1 = 0. \implies  \vec{v}_1 + 0\vec{v}_2 + + 0\vec{v}_0 = 6.$
1.8	Linear Transformations (+)
recall:	A ∈ Max(mn) is a "machine" with inmuts
	A ∈ Mat (m, n) is a "machine" with inputs  X ∈ Rn & autputs Ax ∈ Rn.
Def!	A transformation (or mapping) $T: \mathbb{R}^n \to \mathbb{R}^m$ is a rule assigning to each $\tilde{x} \in \mathbb{R}^n$ a vector $T(\tilde{x}) \in \mathbb{R}^m$ is the domain 4 $\mathbb{R}^m$ is the
	The assigning to each XEIK a vector
	codomain. T(x) is the image of x & the
	set of all T(x) is the range (or image)
1 15 (F) c	AT. A TITO PARTED TO THE TOTAL TO THE TOTAL TO THE TOTAL TOT
3	many the same of the same of the
= Idea: +	For $A \in Mat(m,n)$ , $T(\vec{x}) = A\vec{x}$ is a fcn.
-	$\frac{1}{1} = \frac{1}{3} = \frac{3}{3} = \frac{3}{3}$
ex; u	$+ A = (3 \ 5) \vec{u} = (2) \vec{b} = (2) \vec{c} = (3)$
Idea: t	$+ T: \mathbb{R}^2 \longrightarrow \mathbb{R}^3$ be $T(\hat{x}  = A\hat{x}: i.e.,$
	(1-3)(x)(x-3x)
	$T(\bar{x}) = (3.5)(x) = (3x_1 + 5x_2)$
<b>a</b>	(-17/12/ (-X,+7X2).



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