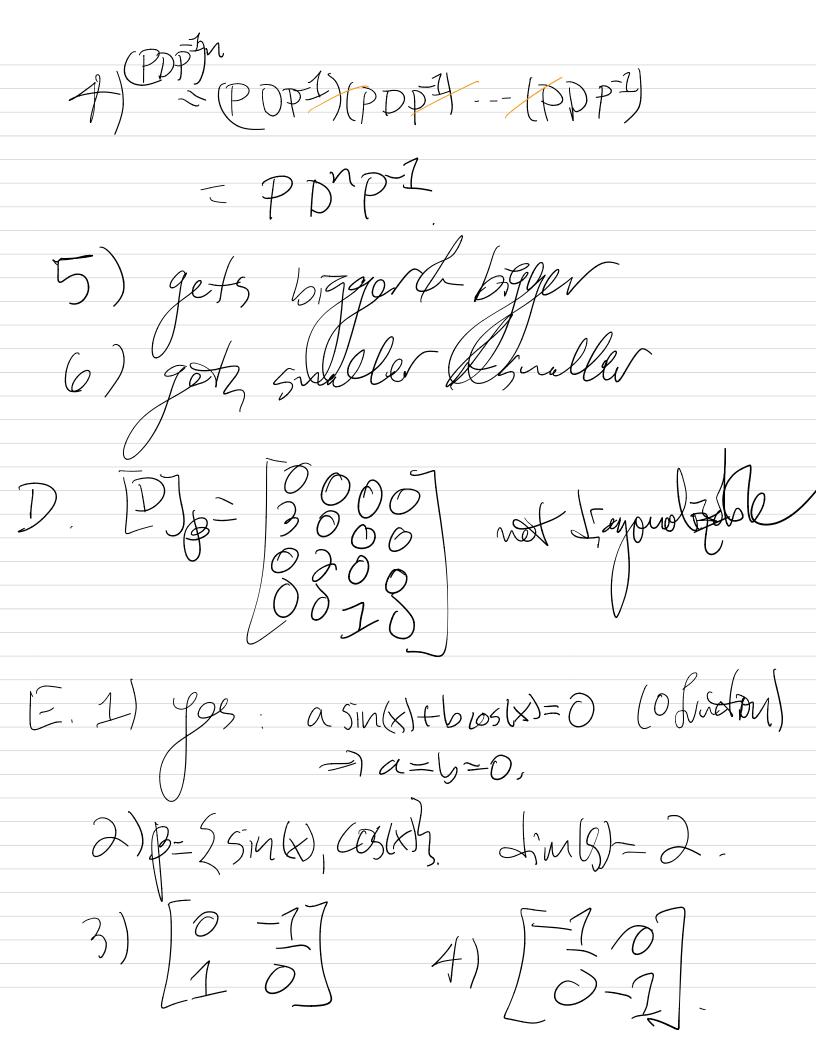
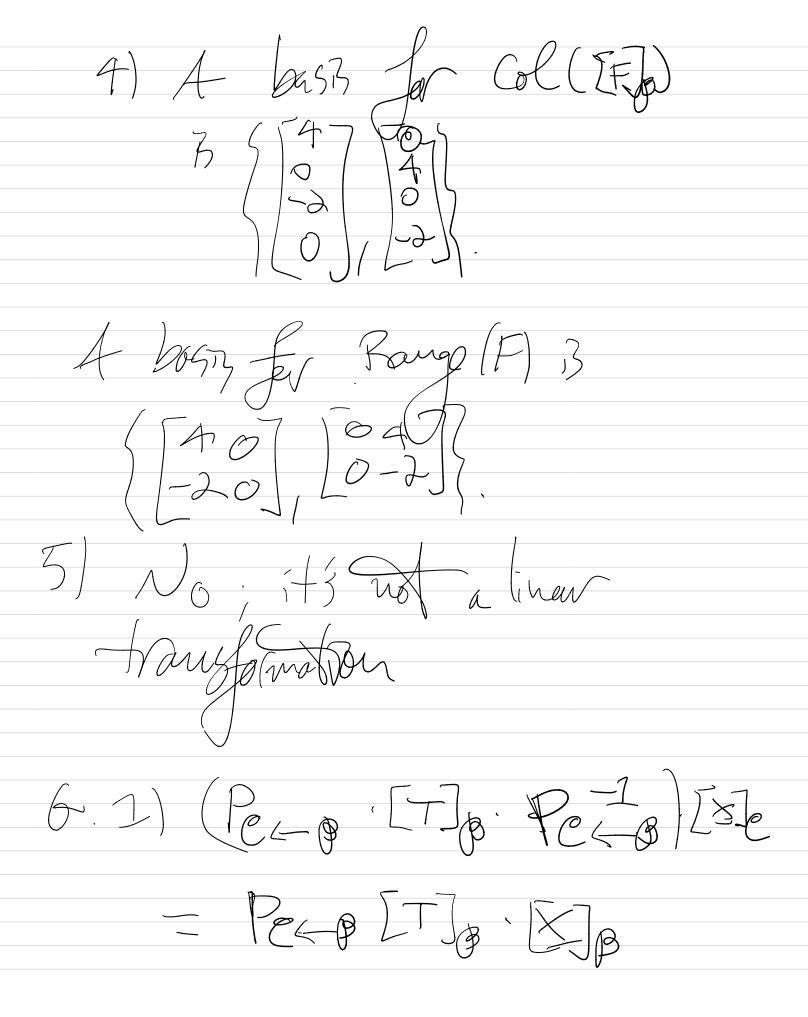
A.1) characteristic polynomial  $= det \left( \begin{bmatrix} -\lambda & 1 & 0 \\ 2 & 1 - \lambda \end{bmatrix} \right) = \lambda^2 - \lambda - 2$ eigenvalues are  $\lambda = 2, \lambda = -1$ 1-1 Noll [2-1] = Span [-1] 9agis 2 1 3 3) P = 176-1 111  $4 \qquad \begin{array}{c|c} 2 & 0 \\ \hline 0 & 7 \end{array}$ 

trangular matrix

—) etgenvolves on Siggend 1-2 exemplace = Null ( [010] = Spank I - Simengorial 1=3 eigenspace = NUM (0-11)= Span 11 1- Linenz Tuel C.1) 0 0 03) By get aronaly



F. 1) 
$$F(X+Y) = A(X+Y) = AX+AY$$
  
 $= F(X)+F(Y)$   
 $F(CX) = A(CX) = CA = CF(X)$ .  
2)  $[40-60]$   
 $[0.40-60]$   
 $[0.40-60]$   
 $[0.40-60]$   
 $[0.40-60]$   
 $[0.40-60]$   
 $[0.40-60]$   
 $[0.40-60]$   
 $[0.40-60]$ 



This means [T] by la 67 4) [T]e = Pecp. [T]p Petp Standard
matrix of T by ... by [b2 -- by] Same as formula. 5) Follows from ETTE - PELP FOLD. 6) Using (5), similar to Tragonal varit venig Liggonal syn some bass.