

**Ex. 1.**

Write the transition matrix from basis  $B_1 = \{[2,1,1], [5,1,-2], [3,0,1]\}$  to the unit basis  $B_2$ .

**Ex. 2.**

Write the transition matrix from basis  $B_1 = \{[1,3,1], [2,0,1], [4,1,1]\}$   
to  $B_2 = \{[1,1,1], [0,2,1], [3,0,2]\}$

**Ex. 3.**

Solve exercise 1 from homework 9 using the transition matrix P.

**Ex. 4.**

Check if the matrix  $A = \begin{bmatrix} 4 & 0 & 3 \\ -2 & 3 & 1 \\ 1 & 0 & 2 \end{bmatrix}$  is diagonalizable. Find the Jordan matrix for A.