GOOD LUCK!!!

Problem 1. Find the transition matrix from basis $B$ to basis $B'$ if

$$B = \{(1,0,0),(0,1,0),(0,0,1)\}$$

and

$$B' = \{(2,4,-6),(1,-4,-6),(1,2,-1)\}.$$ 

Problem 2. Consider basis $B$ and basis $B'$ from the previous problem.

- Let $[x]_B = (1,2,3)$, find $[x]_{B'}$.
- Let $[x]_{B'} = (1,2,3)$, find $[x]_B$.

Problem 3. Find the transition matrix from basis $B$ to basis $B'$, and the transition matrix from $B'$ to $B$ if

$$B = \{(1,-1,0),(0,1,1),(-1,0,1)\}$$

and

$$B' = \{(2,4,-3),(1,0,0),(1,2,-1)\}.$$ 

In addition

- Let $[x]_B = (1,1,1)$, find $[x]_{B'}$.
- Let $[x]_{B'} = (1,1,1)$, find $[x]_B$. 