$$\begin{pmatrix} V_1 & V_2 & V_3 & V_5 \end{pmatrix} = \begin{pmatrix} -2 & -4 & 1 & 0 \\ 1 & 3 & -1 & 0 \\ 0 & 1 & 1 & 1 \\ 1 & 0 & -1 & 1 \end{pmatrix} = M_{C \to B}$$

$$\left(\phi(V_1)\ \phi(V_2)\ \phi(V_3)\ \phi(V_5) \right) = A = \begin{pmatrix} 0 & 0 & 2 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix}$$

rispetto alla base $B = \{V_1, V_2, V_3, V_5\}$ e $C = \{e_1, e_2, e_3, e_4\}$ nel codominio

infatti $\phi(V_1) = Ae_1 = \begin{pmatrix} 0 & 0 & 2 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} \begin{pmatrix} 1 \\ 0 \\ 0 \\ 0 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$

$\phi(V_3) = Ae_3 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$

ossia $A = A_{B \to C}$, per avere $A_{C \to C} = A_{B \to C} \, M_{B \to C}$

ove $M_{B \to C} = \left(M_{C \to B} \right)^{-1}$

in definitiva $A_{C \to C} = \begin{bmatrix} 0 & 0 & 2 & 1 \\ 0 & 0 & 1 & 1 \end{bmatrix} \cdot \begin{bmatrix} -2 & -4 & 1 & 0 \\ 1 & 3 & -1 & 0 \\ 0 & 1 & 1 & 1 \\ 1 & 0 & -1 & 1 \end{bmatrix}^{-1}$

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Editor - /Users/lucalebon/Desktop/CAED/MATLAB LABs/lab3/cambiodibase.m

+3 | MoM.m | hallen_orfanidis.m | tescase1e2.m | LABB3.m | prova.m | cambiodibase.m | +

```
B=[0 0 2 1; 0 0  1 1];
C=[-2 -4 1 0; 1 3 -1 0; 0 1 1 1; 1 0 -1 1];
D=inv(C);
F=B*D;
I=C*D;
F*[1;-1;1;-1]
F*[0;0;1;1]
```

Command Window

```
>> cambiodibase

ans =

    2.0000
    1.0000


ans =

    1.0000
    1.0000

>>
```

Workspace

Name ▲	Value
A	[2,1;1,1]
ans	[1.0000;1.0000]
B	[0,0,2,1;0,0,1,1]
C	*4x4 double*
D	*4x4 double*
F	[-0.8333,-1.500...
I	*4x4 double*
P	[-1.8333,-3.500...
Q	[1,2,1,3;1,1,0,2]

UTF-8 | script | Ln 7