Web**Assign**CH 1.2 (Homework)

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1. 5/5 points | Previous Answers

KolmanLinAlg9 1.2.004.

If

$$\begin{bmatrix} a+b & c+d \\ c-d & a-b \end{bmatrix} = \begin{bmatrix} 5 & 5 \\ 11 & 3 \end{bmatrix},$$

find a, b, c, and d.

$$b = \boxed{1}$$

$$d = \boxed{-3}$$

2. 5/5 points | Previous Answers

KolmanLinAlg9 1.2.006.

Let

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 4 \end{bmatrix}, \quad B = \begin{bmatrix} 1 & 0 \\ 2 & 1 \\ 3 & 2 \end{bmatrix},$$

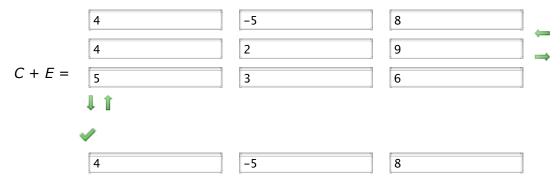
$$C = \begin{bmatrix} 2 & -1 & 3 \\ 4 & 1 & 5 \\ 2 & 1 & 5 \end{bmatrix}, \quad D = \begin{bmatrix} 3 & -2 \\ 2 & 4 \end{bmatrix},$$

$$E = \begin{bmatrix} 2 & -4 & 5 \\ 0 & 1 & 4 \\ 3 & 2 & 1 \end{bmatrix}, \quad F = \begin{bmatrix} -1 & 5 \\ 2 & 1 \end{bmatrix},$$

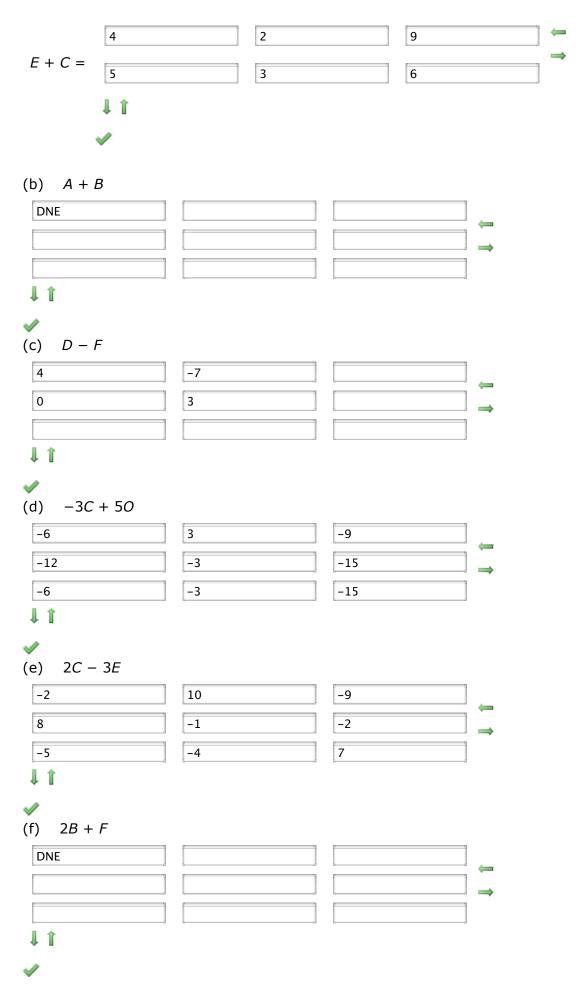
and
$$O = \begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$
.

If possible, compute the indicated linear combination. (If not possible, enter DNE into any cell of the matrix.)

(a)
$$C + E$$
 and $E + C$



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3. 5/5 points | Previous Answers

KolmanLinAlg9 1.2.008.

Let

$$A = \begin{bmatrix} 1 & 2 & 4 \\ 2 & 1 & 3 \end{bmatrix}, \quad B = \begin{bmatrix} 1 & 0 \\ 2 & 1 \\ 3 & 2 \end{bmatrix},$$

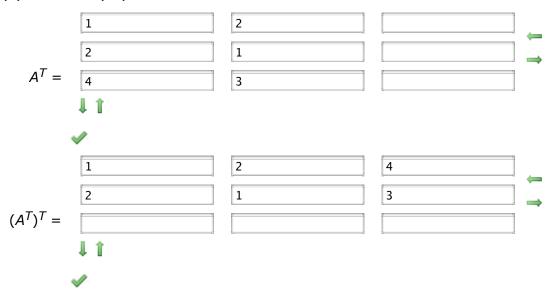
$$C = \begin{bmatrix} 4 & -1 & 3 \\ 4 & 2 & 5 \\ 2 & 1 & 5 \end{bmatrix}, \quad D = \begin{bmatrix} 3 & -2 \\ 4 & 4 \end{bmatrix},$$

$$E = \begin{bmatrix} 2 & -4 & 5 \\ 0 & 1 & 4 \\ 3 & 2 & 1 \end{bmatrix}, \quad F = \begin{bmatrix} -4 & 5 \\ 2 & 3 \end{bmatrix},$$

and
$$O = \begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$
.

If possible, compute the following. (If not possible, enter DNE into any cell of the matrix.)

(a) A^T and $(A^T)^T$

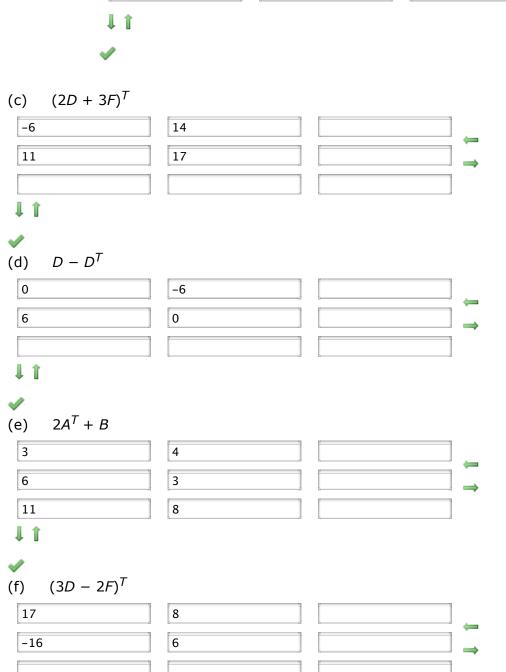


(b) $(C + E)^T$ and $C^T + E^T$



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4. 5/5 points | Previous Answers

KolmanLinAlg9 1.2.010.

Is the matrix $\begin{bmatrix} 5 & 0 \\ 0 & 4 \end{bmatrix}$ a linear combination of the matrices $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ and $\begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}$?

