Web**Assign**

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MA 265 Spring 2013, section 132, Spring 2013
Instructor: Alexandre Eremenko

**CH 3.4 (Homework)**

**Current Score :** 20 / 20        **Due :** Thursday, February 7 2013 11:40 PM EST

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**The due date for this assignment is past.** Your work can be viewed below, but no changes can be made.

**Important!** Before you view the answer key, decide whether or not you plan to request an extension. Your Instructor may *not* grant you an extension if you have viewed the answer key. Automatic extensions are not granted if you have viewed the answer key.

Request Extension  View Key

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**1.** 6.66/6.66 points | Previous Answers                                                    KolmanLinAlg9 3.4.001.

Theorem 3.11 states:

If $A = [a_{ij}]$ is an $n \times n$ matrix,  then

$$a_{i1}A_{k1} + a_{i2}A_{k2} + \cdots + a_{in}A_{kn} = 0 \quad \text{for } i \neq k;$$
$$a_{1j}A_{1k} + a_{2j}A_{2k} + \cdots + a_{nj}A_{nk} = 0 \quad \text{for } j \neq k.$$

Verify Theorem 3.11 for the matrix

$$A = \begin{bmatrix} 2 & -3 & -1 \\ 0 & -5 & -5 \\ 1 & -1 & -3 \end{bmatrix}$$

by computing $a_{11}A_{12} + a_{21}A_{22} + a_{31}A_{32}$.

$$a_{11}A_{12} = \boxed{-10} \checkmark$$
$$a_{21}A_{22} = \boxed{0} \checkmark$$
$$a_{31}A_{32} = \boxed{10} \checkmark$$
$$a_{11}A_{12} + a_{21}A_{22} + a_{31}A_{32} = \boxed{0} \checkmark$$

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**2.** 6.66/6.66 points | Previous Answers                                                    KolmanLinAlg9 3.4.002.

Let $A = \begin{bmatrix} 7 & 2 & 4 \\ 3 & 1 & 2 \\ 9 & 3 & 7 \end{bmatrix}$.

(a) Find adj $A$.

| 1 | −2 | 0 |
|---|----|---|
| −3 | 13 | −2 |
| 0 | −3 | 1 |

✔

(b) Compute det($A$).

$\boxed{1}$ ✔

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**3.** 6.68/6.68 points | Previous Answers

KolmanLinAlg9 3.4.003.

Let $A = \begin{bmatrix} -8 & 3 & 9 \\ -3 & 1 & 3 \\ -9 & 3 & 10 \end{bmatrix}$.

(a) Find adj $A$.

| 1 | −3 | 0 |
|---|----|---|
| 3 | 1  | −3 |
| 0 | −3 | 1 |

✔

(b) Compute det($A$).

1  ✔