

MTH 261 Graded HW 2

Name _____

This assignment is due at 6:00 PM on Wednesday, April 19

You may work on this assignment with your classmates or anybody else you please. You may get help from a tutor or even the instructor. What you may not do is simply copy somebody else's work – that completely obviates the purpose of the assignment. If you forget to complete the assignment before it is due, do not simply copy someone else's paper and turn that in ... that is not "working together," that is taking credit for somebody else's work. You should not be working on this in class right before it is due; you have a week to get this done – it should be done well before ten minutes before it is due.

1. Determine the value of k so that the vector $\begin{bmatrix} -2 \\ -12 \\ k \end{bmatrix}$ is in the span of $\left\{ \begin{bmatrix} 1 \\ 1 \\ -2 \end{bmatrix}, \begin{bmatrix} 1 \\ 3 \\ 2 \end{bmatrix} \right\}$. Show the relevant work and make sure that your reasoning and your conclusion are clear.

2. Using the techniques illustrated in Example 2.7 of your notes, balance the following chemical equation.

