# **PreCalc** – Ch-6 Review ***– Answer Key***

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| 1. Perform the following matrix multiplication without a graphing calculator.
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| 1. Solve for the missing letters.
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| 1. Solve the following for x and y without a graphing calculator
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| 1. Verify that $B$ is the inverse of $A$ & indicate why it is or it is not (**by hand – no GC).**
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| $$A=\left[\begin{matrix}2&2\\4&3\end{matrix}\right]$$ | $$B=\left[\begin{matrix}-1.5&1\\2&-1\end{matrix}\right]$$ |
| **Yes, they are inverses (AB and BA = *I*)** |
| 1. Solve the system of equations without a graphing calculator using matrices
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| 1.
 | 1.
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|  |  |
| 1. Find the determinant, then find the inverse, if it exists **(by hand – no GC).**
 |
| 1.
 |  | 1.
 |  |
|  |  |
| 1. Solve the following system using matrices (you can use a calculator, but clearly show your work & process).
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| 1. The sum of three numbers is 6. The third number is the sum of the first and second numbers. The first number is one more than the third number. Write a matrix equation that would find the three numbers and then solve **(GC okay).**

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| 1. A computer repair company charges two different hourly rate, one for during the day and one at night. On a particular project, they were contracted 11 hours during the day and 5 hours at night and charged $370. On another project, they were contracted 9 hours during the day and 2 hours at night and charged $240. What is their hourly rate during the day? What is their hourly rate at night?

 **x (day) = 20, y (night) = 30** |