

## PreCalc - 6-2 & 6-3 Review

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1. Determine whether  $A$  and  $B$  are inverse matrices. State why or why not.

$$A = \begin{bmatrix} 10 & 9 \\ 2 & 2 \end{bmatrix}$$

$$B = \begin{bmatrix} 1 & -4.5 \\ -1 & 5 \end{bmatrix}$$

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2. Determine whether  $A$  and  $B$  are inverse matrices. State why or why not.

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

$$B = \begin{bmatrix} 0.5 & 1 \\ -0.2 & -1 \end{bmatrix}$$

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3. Find the inverse ( $A^{-1}$ ), if it exists.

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

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4. Find the inverse ( $A^{-1}$ ), if it exists.

$$A = \begin{bmatrix} 5 & 10 \\ -1 & -2 \end{bmatrix}$$

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5. Find the inverse ( $A^{-1}$ ), if it exists.

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

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6. **Use an inverse matrix** to solve this system of equations, if possible. If not state why.

$$4x = 6 + 2y$$

$$6y - x = 4$$

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7. **Use an inverse matrix** to solve this system of equations, if possible. If not state why.

$$8x - 2y = 1$$

$$4x = y$$