

Precalculus Quiz Review#1: Spring 2022

Name:

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1. An **consistent system** is one which...
 - A. has exactly one solution.
 - B. has more than one solutions.
 - C. has no solutions
 - D. has at least one solution.

2. A **augmented matrix** will always contain...
 - A. one more row than equations in a linear system.
 - B. exactly the same number of columns as variables in a linear system.
 - C. one more column than variables in a linear system
 - D. exactly three rows.

3. Use the **substitution method** to solve the nonsquare system below:

$$\begin{cases} x^2 - 4x - 2y = 2 \\ -x + y = -1 \end{cases}$$

4. Solve the **nonsquare** system below in terms of a ,
where a is any real number:

$$x = \underline{\hspace{2cm}}$$

$$y = \underline{\hspace{2cm}}$$

$$\begin{cases} 2x & + 3z = 3 \\ 4x - 3y + 7z = 5 \end{cases}$$

$$z = \underline{\hspace{2cm}}$$

5. Use **Gaussian elimination** to solve this system of equations. Be sure to...(i) convert to augmented matrix form and (ii) use both back-substitution and Gauss-Jordan elimination to solve for x, y and z .

$$\begin{cases} x & - 3z = -2 \\ 3x + y - 2z = 5 \\ 2x + 2y + z = 4 \end{cases}$$

Use this space to continue work on (5).