

Math 1553, Quiz 2 (1.1–1.3), Fall 2026, Version B

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For questions with bubbles, either fill in the bubble completely or leave it blank. **Do not** mark any bubble with “X” or “/” or any such intermediate marking. Anything other than a blank or filled bubble will be given a score of zero.

1. (1 point) If an augmented matrix in RREF has a pivot in every row, then its corresponding system of linear equations must be consistent.

☐ True

☐ False

2. (0.5 points each) Which of the following matrices are in RREF? Fill in the bubble for all that apply.

☐ $\left(\begin{array}{ccc|c} 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 2 \end{array} \right)$

☐ $\left(\begin{array}{cccc|c} 0 & 1 & 0 & 3 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{array} \right)$

3. (0.5 points each) Suppose an augmented matrix with 4 rows and 6 columns (including its rightmost column) has 3 pivots and corresponds to a consistent system of linear equations. Fill in the bubble for exactly one choice.

(i) The solution set is:

☐ a point

☐ a line

☐ a plane

☐ $\mathbf{R}^2$

☐ $\mathbf{R}^3$

(ii) The solution set lives in:

☐ $\mathbf{R}^2$

☐ $\mathbf{R}^3$

☐ $\mathbf{R}^4$

☐ $\mathbf{R}^5$

☐ $\mathbf{R}^6$