Math 1553, Quiz 6 (3.5-3.6 and Ch. 4), Fall 2026, Version A

Name (ALL CAPS)		**GT ID**		**Section**	

Please write your name in ALL CAPS. 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) Suppose A is an 3×3 matrix that is invertible. Then the last column of the RREF of A must be $\begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix}$.

   ◯ TRUE ◯ FALSE

2. (1 points) Find the value of a so that $a \cdot \det \begin{pmatrix} 3 & 6 & 9 \\ 1 & 0 & 1 \\ 2 & 2 & 3 \end{pmatrix} = \det \begin{pmatrix} 1 & 2 & 3 \\ 2 & 0 & 2 \\ 2 & 2 & 3 \end{pmatrix}$. Clearly fill in the bubble for the correct answer below.

   ◯ $a = 3$ ◯ $a = -3$ ◯ $a = 6$ ◯ $a = -6$ ◯ $a = \frac{2}{3}$

   ◯ $a = \frac{3}{2}$ ◯ $a = 0$ ◯ $a = 2$ ◯ none of these

3. (1 point) Find the area of the parallelogram with vertices

   $$(1, 5), \quad (4, 6), \quad (2, 9), \quad (5, 10).$$

   Clearly fill in the bubble for the correct answer below.

   ◯ $\frac{11}{2}$ ◯ 6 ◯ -11 ◯ 11 ◯ 12 ◯ 14 ◯ none of these