ANSWER KEY + SOLUTIONS

Part A (12 points): Record answers on the bubble sheet in your answer booklet.

Answers or work indicated anywhere else on your exam will not be eligible for marking. Fill in the rectangle corresponding to your answer fully, using a dark pen or pencil.

1. [1 pt.] True or False: Every subset of $\mathbb{R}^n$ containing the zero vector is a subspace of $\mathbb{R}^n$.

(A) True (B) False (C) Not enough information to determine

2. [1 pt.] True or False: For an $m \times n$ matrix A, $\text{Col}(A)$ is the set of all vectors that can be written as $A\vec{x}$ for some $\vec{x}$.

(A) True (B) False (C) Not enough information to determine

3. [1 pt.] True or False: If $\mathbf{v}_1, \mathbf{v}_2, \ldots, \mathbf{v}_p$ are vectors in $\mathbb{R}^n$, then $\text{Span}\{\mathbf{v}_1, \mathbf{v}_2, \ldots, \mathbf{v}_p\}$ is equal to the row space of the matrix with rows $\mathbf{v}_1, \mathbf{v}_2, \ldots, \mathbf{v}_p$.