ERRATA TO EXAM 2 A–D SOLUTIONS

Exam A, Q3 It might be hepful to note that if A is an $n \times n$-matrix with eigenvalues $\lambda_1, \dots, \lambda_n$, then the characteristic equation is $p(t) = \det(A - t\mathrm{I}_n) = \det(A) + \ldots + (-1)^n t^n$ and has roots $\lambda_1, \ldots \lambda_n$ so $p(t) = (\lambda_1 - t) \cdots (\lambda_n - t)$ and $\det(A) = \lambda_1 \cdots \lambda_n$.

Exam A, Q5 Should read "The eigenspace for $4 - 3i$ is the null space of $\begin{bmatrix} 3i & -3 \\ 3 & 3i \end{bmatrix}$ and an eigenevector is $\begin{bmatrix} 1 \\ i \end{bmatrix}$."

Exam B, Q8 The matrix A is diagonalizable since it has three distinct eigenvalues and A is of size 3×3.

Exam B, Q11 The adjunct is another term for the adjugate.

Exam D, Q6 The third row of the final matrix (in echelon form) should be $\begin{bmatrix} 0 & 0 & 0 & 2 & 2 \end{bmatrix}$ but the solution is otherwise correct.

Exam D, Q10 $\mathcal{E}$ denotes the standard basis of $\mathbb{R}^2$.