

Quiz 7

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. §2.3 #21 (3 marks) Decide whether the given matrix is invertible, and if so, use the adjoint method to find its inverse.

$$A = \begin{bmatrix} 2 & -3 & 5 \\ 0 & 1 & -3 \\ 0 & 0 & 2 \end{bmatrix}$$

Question 2. #3.4.10 (3 marks) Let B be a 3×3 matrix where $\det(B) = 3$. Find $\det(2B + B^2 \text{adj}(B))$.

Question 3. §3.1 #TF (2 marks) Determine whether the statement is true or false, and justify your answer.
Two equivalent vectors must have the same initial point.

Question 4. §3.1 #TF (2 marks) Determine whether the statement is true or false, and justify your answer.
If a and b are scalars such that $a\vec{u} + b\vec{v} = \vec{0}$, then $\vec{u}$ and $\vec{v}$ are parallel vectors.