QUIZ 7 FOR MATH 304-08, 3/29/2023 YOUR NAME _____

Show full justification of every answer.

(1) (10+5 points) Here is a matrix $A = \begin{bmatrix} 0 & 1 & 2 & 4 \\ 3 & 0 & 7 & 8 \\ -3 & 0 & -7 & 0 \\ -4 & 0 & 1 & 1 \end{bmatrix}$.

(a) Find the determinant $|A|$. Hint: Look for the easiest way to do it.

(b) Use your answer to part (a) to decide whether 0 is an eigenvalue of A.

TURN OVER FOR MORE QUESTION(S)

(2) (15 points) Here is a matrix $B = \begin{bmatrix} 2 & 0 \\ 3 & 1 \end{bmatrix}$. Find the eigenvalues of B and their eigenspaces.