

QUIZ #17, 10/23/07

MATH 54, FALL 2007

Show your work and justify your answers! Feel free to use both sides.

Name:

1. (4 pts) What is the area of the parallelogram with corners at $(0, 0)$, $(-3, 2)$, $(4, 1)$, and $(1, 3)$?
2. (4 pts) What values can the determinant of an orthogonal transformation take? (Hint: Remember that an orthogonal transformation A is one for which $A^T A = I_n$.) **Justify** your answer.
3. (2 pts) True/False (you needn't justify your answer): For every matrix A and scalar k , we have $\det(kA) = k \det(A)$.