

# Math 2311 Quiz #5

SPRING SEMESTER 2008

Name SOLUTIONS

1. Suppose  $A$  is a  $5 \times 5$  matrix with  $|A| = 3$ . Compute

(a)  $|-A| = (-1)^5 |A| = -3$

(b)  $|2A^2| = 2^5 |A|^2 = 32(9) = 288$

(c)  $|2A^{-1}| = 2^5 \cdot \frac{1}{|A|} = 32/3$

(d)  $|(2A)^{-1}| = \frac{1}{|2A|} = \frac{1}{2^5 |A|} = \frac{1}{96}$

(e)  $3|A^{-1}|$   
 $= 1$