Score:

Name: Solutions
Period (circle one): 1 2 ③ 4 5 6
Team (circle one): a b c d e f

SM 261 – Matrix Algebra – Quiz 19
Section 4.6 – Rank

1. If a 3×8 matrix A has rank 3, find dim Nul A, dim Row A, and rank A^T.

Rank A + Dim Nul A = Columns of A

$$\underline{3} \quad + \quad \underline{⑤} \quad = \quad \underline{8}$$

dim Row A = Rank A = ③

Rank A^T = Rank A = ③

2. If the null space of a 5×6 matrix A is 4-dimensional, what is the dimension of the row space of A.

Rank A + Dim Null A = # columns A

$$\underline{②} \quad + \quad \underline{4} \quad = \quad 6$$

Dim Col A = Dim Row A