

Name:

**MATH 54 QUIZ 2**  
**THU, SEP 6, 2018**

Time: 15 minutes.

- (1) Find an explicit description of  $\text{Nul } A$  by listing vectors that span the null space:

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$$

- (2) Find the pivot columns of  $A$  and compute the dimension of  $\text{Col } A$ :

$$A = \begin{bmatrix} -8 & -2 & -9 \\ 6 & 4 & 8 \\ 4 & 0 & 4 \end{bmatrix}$$