

Directions: Please answer in the space provided. No calculators. Please put all phones, etc., away.

Use any method or result discussed in class to find the following determinants.

$$1. \begin{vmatrix} \frac{1}{2} & -7 \\ 3 & 6 \end{vmatrix}$$

$$2. \begin{vmatrix} 3 & 2 & 4 \\ 1 & 0 & 3 \\ 1 & 2 & 1 \end{vmatrix}$$

$$3. \begin{vmatrix} 0 & -5 & 0 & 0 & 0 \\ 3 & 0 & 0 & 0 & 0 \\ 0 & 0 & 2 & 0 & 0 \\ 0 & 0 & 0 & 5 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{vmatrix}$$

$$4. \begin{vmatrix} 1 & 2 & 4 & 1 & 2 \\ 2 & 4 & 3 & 0 & 1 \\ 3 & 6 & 7 & 3 & 3 \\ 4 & 8 & 7 & 5 & 3 \\ 5 & 10 & 5 & 6 & 1 \end{vmatrix}$$

$$5. \begin{vmatrix} 9 & 3 & 7 & 1 & 2 \\ 3 & 4 & 3 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 \\ 4 & 8 & 7 & 5 & 3 \\ 5 & 10 & 5 & 6 & 1 \end{vmatrix}$$