

## 4-5 Matrices 2

$$A = \begin{bmatrix} 4 & 2 \\ 6 & 5 \end{bmatrix} \quad B = \begin{bmatrix} 4 & -2 \\ 3 & -1 \end{bmatrix} \quad C = \begin{bmatrix} 5 & 2 \\ 2 & 1 \end{bmatrix} \quad D = \begin{bmatrix} 4 & 2 & 8 \\ 3 & 3 & 5 \\ 1 & 1 & 6 \end{bmatrix}$$

Find the determinant of the following.

1.  $\det(A)$                       2.  $\det(B)$                       3.  $\det(C)$

4. What is the identity matrix of a 2 x 2 matrix?

5. What is the identity matrix of a 3 x 3 matrix?

Find the multiplicative inverses of the given matrices. Remember that

$$\text{if } A = \begin{bmatrix} a_1 & b_1 \\ a_2 & b_2 \end{bmatrix} \text{ then } A^{-1} = \frac{1}{\det A} \bullet \begin{bmatrix} b_2 & -b_1 \\ -a_2 & a_1 \end{bmatrix}$$

6.  $A^{-1}$

7.  $B^{-1}$

8.  $C^{-1}$