

# Matrices

## 4.7 The Inverse of a Matrix

(a) Square matrices ( $n \times n$ ):  $A, A^{-1} \Rightarrow A^{-1}A = I$

$$A^{-1}AA^{-1} = A^{-1}$$

$$A^{-1}I = A^{-1}$$

So, if we have  $A = AI$

$$I = AA^{-1}$$

$$(b) A^{-1} = \frac{adj A}{|A|} \Rightarrow |A| \neq 0$$

$$adj(A) = (\text{cofactor } A)^T$$