

## Class 2: Proof Methods

**Contrapositive:**

$$\frac{P \implies Q}{\text{NOT}(Q) \implies \text{NOT}(P)} \qquad \frac{\text{NOT}(Q) \implies \text{NOT}(P)}{P \implies Q}$$

**Theorem to Prove:** If the product of  $x$  and  $y$  is even, at least one of  $x$  or  $y$  must be even.