Theorem

If $x + 3$ is even, then x is odd.

Note here that $P =$ "$x + 3$ is even" and $Q =$ "x is odd".

- **Direct.** Assume $x + 3$ is even. ... [do math] ... then x is odd.
- **Contrapositive.** Assume that x is even ... [do math] ... then $x + 3$ is odd.
- **Contradiction.** Assume that $x + 3$ is even and x is even ... [do math] ... obtain contradiction.