

MATH 2001
CONTRAPOSITIVE AND CONTRADICTION

Upcoming deadlines:

- Due Wednesday, Mar 9: final draft of proof 7, first draft of proof 8.
- Due Monday, Mar 14: final draft of proof 8, first draft of proof 9.

Styles of proof.

- Direct:

- Contrapositive:

- Contradiction:

Prove the following.

1. There is no integer that is both even and odd.
2. If a^2 is even, then a is even.
3. The number $\sqrt{2}$ is irrational.
4. The number $\sqrt{3}$ is irrational.
5. If $y^3 + yx^2 \leq x^3 + xy^2$, then $y \leq x$.