

# Homework Template

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MATH 301 - Introduction to Proof and Abstract Reasoning

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**Theorem x.yz.** Delete this text and write theorem statement here.

*Proof.* Blah, blah, blah. Here is an example of the `align` environment:

$$\begin{aligned}\sum_{i=1}^{k+1} i &= \left( \sum_{i=1}^k i \right) + (k+1) \\ &= \frac{k(k+1)}{2} + k+1 && \text{(by inductive hypothesis)} \\ &= \frac{k(k+1) + 2(k+1)}{2} \\ &= \frac{(k+1)(k+2)}{2} \\ &= \frac{(k+1)((k+1)+1)}{2}.\end{aligned}$$

□

**Proposition x.yz.** Let  $n \in \mathbb{Z}$ .

*Disproof.* Blah, blah, blah. I'm so smart.

□