

Example Inference Rules

$$\frac{}{\vdash 0 \in \mathbb{N}} \text{ P1}$$

$$\frac{}{n \in \mathbb{N} \vdash n+1 \in \mathbb{N}} \text{ P2}$$

$$\frac{}{n < m \vdash n+1 \leq m} \text{ INC}$$

$$\frac{}{0 < n \vdash n-1 \in \mathbb{N}} \text{ P2'}$$

$$\frac{}{n \leq m \vdash n-1 < m} \text{ DEC}$$

$$\frac{}{n \in \mathbb{N} \vdash 0 \leq n} \text{ P3}$$

$$\frac{H, P \vdash R \quad H, Q \vdash R}{H, P \vee Q \vdash R} \text{ OR_L}$$

$$\frac{H \vdash P}{H \vdash P \vee Q} \text{ OR_R1}$$

$$\frac{H \vdash Q}{H \vdash P \vee Q} \text{ OR_R2}$$

$$\frac{H1 \vdash G}{H1, H2 \vdash G} \text{ MON}$$