# Sequential Play

- say Mindy plays before Max
- if Mindy chooses $\mathbf{P}$ then Max will pick $\mathbf{Q}$ to maximize $\mathbf{M}(\mathbf{P}, \mathbf{Q}) \Rightarrow$ loss will be

$$L(\mathbf{P}) \equiv \max_{\mathbf{Q}} \mathbf{M}(\mathbf{P}, \mathbf{Q})$$

- so Mindy should pick $\mathbf{P}$ to minimize $L(\mathbf{P})$ $\Rightarrow$ loss will be

$$\min_{\mathbf{P}} L(\mathbf{P}) = \min_{\mathbf{P}} \max_{\mathbf{Q}} \mathbf{M}(\mathbf{P}, \mathbf{Q})$$

- similarly, if Max plays first, loss will be

$$\max_{\mathbf{Q}} \min_{\mathbf{P}} \mathbf{M}(\mathbf{P}, \mathbf{Q})$$