	q	$1-q$
p	m_{11}	m_{12}
$1-p$	m_{21}	m_{22}

- Perfect Information Zero-Sum: Pure strategy optimal

$$\underset{Rows\ i}{Max}\ \underset{Columns\ j}{Min}\ m_{ij} = \underset{Columns\ j}{Min}\ \underset{Rows\ i}{Max}\ m_{ij}$$

- Hidden Information Zero-Sum: Mixed strategy optimal

$$\max_p \min(p \times m_{11} + (1-p) \times m_{21}, p \times m_{12} + (1-p) \times m_{22}) =$$
$$\min_q \max(q \times m_{11} + (1-q) \times m_{12}, q \times m_{21} + (1-q) \times m_{22})$$

Non-Zero Sum:

	Hockey	**Movie**
Hockey	**+2,+1**	**0,0**
Movie	**0,0**	**+1,+2**

- *Pure equilibrium:*

$u_i(s^*_1,.., s^*_{i-1}, s^*_i, s^*_{i+1}, ..,s^*_n) \geq u_i(s^*_1,.., s^*_{i-1}, s_i, s^*_{i+1}, ..,s^*_n)$ for any s_i

- Iterative removal of dominated strategies
- Derivatives of $u_i(s^*_1,.., s^*_{i-1}, s_i, s^*_{i+1}, ..,s^*_n)$ with respect to s_i are all 0

Non-Zero Sum:

	Hockey	**Movie**
Hockey	**+2,+1**	**0,0**
Movie	**0,0**	**+1,+2**

- *Mixed equilibrium:*
- p_{ij} = probability that player *i* uses strategy *j*

  $\boldsymbol{p}_i = [p_{i1},\ldots,p_{im}]$

$u_i(\boldsymbol{p}^*_1,\ldots, \boldsymbol{p}^*_{i-1}, \boldsymbol{p}^*_i, \boldsymbol{p}^*_{i+1}, \ldots,\boldsymbol{p}^*_n) \geq u_i(\boldsymbol{p}^*_1,\ldots, \boldsymbol{p}^*_{i-1}, \boldsymbol{p}_i, \boldsymbol{p}^*_{i+1}, \ldots,\boldsymbol{p}^*_n)$ for any $\boldsymbol{p}_i$