

## Penalty Kicks in Football

Players: Shooter and Keeper

Strategies: Shoot at Left or Right  
anticipate Left or Right

		L	R
S	L	.7, .3	.8, .2
	R	.9, .1	.5, .5

		L	R
S	L	12/45	8/45
	R	15/45	10/45

$$U_K(L) = U_K(R)$$

$$U_S(L) = U_S(R)$$

$$.3p + .9(1-p) = .8p + .5(1-p)$$

$\rightarrow p = 4/9$

$$.7q + .8(1-q) = .9q + .5(1-q)$$

$\rightarrow q = 3/5$

Evidence?