

### Problem Set 3

1. Show that genetic relatedness between an individual and the individual's grand-offspring =  $\frac{1}{4}$ . Assume diploidy and out-breeding.
2. Find genetic relatedness ( $r$ ) between individual  $i$  and individual  $j$ , when  $i$  and  $j$  are first cousins. Assume diploidy and out-breeding.

Think about the following 2-person, 2 pure-strategy, symmetric game.

$$\begin{bmatrix} 3 & 1 \\ 4 & 2 \end{bmatrix}.$$