In-class Practice 19: Games

Solve the following games (taken from Prisner: Game Theory through Examples) with payoff for the row player:

<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>R</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Is D better than U?

L better than R

no dominance

\[ u + 3d = 4u + 2d \]
\[ d = 3u \]

\[ u = \frac{1}{4} \]
\[ d = \frac{3}{4} \]
\[ \text{VAL} = \frac{5}{2} \]

transpose

<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>R</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

L better than R

then D better than U

no dominance

\[ u + 4d = 3u + 2d \]
\[ 2d = 2u \]

\[ d = \frac{1}{2} \]
\[ u = \frac{1}{2} \]
\[ \text{VAL} = \frac{5}{2} \]