IMPs
North/South vulnerable
Dealer: South

<table>
<thead>
<tr>
<th>North</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>♠ KQ6</td>
<td>♠ A83</td>
</tr>
<tr>
<td>♦ KJ87</td>
<td>♦ A7</td>
</tr>
<tr>
<td>♠ K95</td>
<td>♠ AQ64</td>
</tr>
<tr>
<td>♦ Q6</td>
<td>♦ A83</td>
</tr>
<tr>
<td>♣ KJ87</td>
<td>♣ AQ52</td>
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</tbody>
</table>

South opens 2NT. North uses Stayman and finding no 4-4 fit, asks for aces, finding all four. **Is this a good grand slam?**

Forget about squeezes for the moment. What is the chance that both majors break 3-3 (so that 7NT makes?)
What is the chance that at least one major breaks (so that 6NT makes?)

Chance that one suit breaks 3-3:
\[
\frac{\binom{6}{2}\binom{20}{10}}{\binom{26}{13}} \approx 35.53\%
\]

Chance that each of two suits breaks 3-3:
\[
\frac{\binom{6}{2}\binom{6}{2}\binom{14}{14}}{\binom{26}{13}} \approx 13.20\%
\]

Chance that at least one major breaks 3-3:
\[
2 \times 35.53\% - 13.20\% \approx 57.86\%
\]

What about additional squeeze chances? 6NT makes on an automatic squeeze if one defender has 4+ cards in each major. (Duck a diamond to rectify the count, as you learned in Squeezes 101.) The chance of this happening is
\[
\sum_{h=4}^{6} \sum_{s=4}^{6} \frac{\binom{6}{h}\binom{6}{s}\binom{14}{13-h-s}}{\binom{26}{13}} \approx 6.31\%
\]

Not likely, but not negligible either.

7NT makes on a positional squeeze if either spades are 3-3 and LHO has 4 hearts + ♦K, or if hearts are 3-3 and RHO has 4 spades + ♦K. These squeezes are also easy — just make sure to execute a Vienna coup. Either of these events is equally likely; the chance of either one is
\[
\sum_{h=4}^{6} \frac{\binom{6}{h}\binom{6}{3}\binom{13}{9-h}}{\binom{26}{13}} \approx 4.60\%.
\]

There is no 3-suit squeeze for 7NT — for example, if East holds both majors plus the diamond king, he can safely abandon hearts.

**Chance of making 6NT:** 57.86\% + 6.31\% = 64.17\%

**Chance of making 7NT:** 13.20\% + 2 \times 4.60\% = 22.40\%.

So it is clear that you want to be in 6NT.