Exercise

Ella and Max want to meet for a joint activity. Max loves relaxing in Estrela Park, while Ella enjoys surfing at Caparica Beach. However, both prefer being together over doing their favorite activity alone.

The following payoff matrix represents the utilities for all possible outcomes:

| | | Max | |
|------|----------|----------|---------|
| | | Caparica | Estrela |
| Ella | Caparica | 6, 4 | 1, 1 |
| | Estrela | 3, 3 | 4, 8 |

Unfortunately, Max's mobile phone battery is dead, so they cannot communicate to coordinate their plans. However, Ella believes that Max is a 50/50 decision-maker, meaning she expects him to choose Caparica with probability 0.5 and Estrela with probability 0.5.

Where should Ella go to maximize her utility?