1. Is it possible that an event is independent of itself? If so, when?

- It is possible for an event to be independent from itself when it's probability is 0 or 1.

2. Is it always true that if A and B are independent events, then Ac and Bc are independent
events? Show that it is, or give a counterexample.

- If A and B are independent events then, Ac and Bc also will be independent events.

  Example

  Consider A and B events as performance probability of 2 fast pacer bowlers in current play, which are independent.
  Consider new Event C => wind speed suddenly increases while playing, that can affect both players' performance probability individually, but AC and BC probability will be independent.