# Quick Hit 14

1. The weather forecast for tomorrow states that there is a 50% chance of rain, a 20% chance of tornadoes, and a 10% chance of tornadoes without the rain. Letting $R$ be the event "it will rain tomorrow" and $T$ be the event "there will be tornadoes tomorrow," are $R$ and $T$ independent? (*Hint:* make a Venn Diagram to help compute the probabilities.)

2. You are dealt a 5-card hand from a standard deck of cards. What is the probability that you are dealt exactly 2 hearts given that you are dealt exactly 3 red cards?