**Probability: Two Special Cases**

Listed below are two special cases where it is easier to look at the probability of the complement of the event, rather than calculate the probability directly.

1.

2.

**Puzzle #1:** What is the chance of drawing 5 cards from a deck *with replacement* and getting no hearts?

**Puzzle #2:** What is the chance of drawing 5 cards from a deck *without replacement* and getting at least one four?

**Puzzle #3:** What is the chance of drawing 5 cards from a deck *with replacement* and getting all diamonds?

**Puzzle #4:** What is the chance of drawing 5 cards from a deck *without replacement* and not getting all diamonds?

**Puzzle #5:** What is the probability of flipping a coin 10 times and not getting all heads?

**Puzzle #6:** What is the probability of rolling a fair die 4 times and getting at least one 6?