

## Probability 1. Math 5. Homework

1. A jar contains 10 red candies, 7 blue candies, and 3 yellow candies. If you pick one candy at random, what is:

- (a) The probability of getting a blue candy
- (b) The probability of getting a red or yellow candy
- (c) The probability of not getting a red candy

2. From a standard deck of 52 cards, find the probability of drawing:

- (a) The Queen of Spades
- (b) A black King
- (c) Anything except the Queen of Hearts

3. You roll two dice (one red, one black) at the same time.

- (a) How many total outcomes are possible?
- (b) What is the probability of rolling two 1s (snake eyes)?
- (c) What is the probability of rolling a 4 on the red die and a 6 on the black die?

4. I draw a card from a deck, and it turns out to be an Ace. Now I draw another card from the same deck (without replacing the first card). What is the probability that the second card is also an Ace?

5. What is the probability that a randomly chosen person was born:

- (a) In January? (Assume all months are equally likely)
- (b) On February 5? (Assume all 365 days are equally likely)
- (c) On a Sunday? (Assume all days of the week are equally likely)

6. A box contains 500 candies of different colors and sizes. There are 100 large candies and 400 small ones. There are 70 red candies, of which 11 are large. What is the probability that a randomly chosen candy is either red or large (or both)?