

**Quiz**

February 15, 2024

1. Suppose that you have 4 white socks, 2 black socks, 6 red socks, and 3 green socks. Assume that all socks are indistinguishable otherwise. Suppose that you draw 4 socks, all at once. What is the probability that you get 2 socks of the same color and the remaining 2 socks are of the same color, but not all 4 socks are of the same color?
2. A fair six-sided  $(1, 2, 3, 4, 5, 6)$  die is thrown twice. Let  $A = \{\text{sum of the throws equals } 4\}$ , and let  $B = \{\text{at least one of the throws show a } 3\}$ . Find  $P(A|B)$ .