Name Solutions

Finite Mathematics (Math 10120), Fall 2020
Quiz 2, Friday, September 11, 2020

1. A bag contains 4 green marbles, 3 red marbles and 2 white marbles. Two marbles are chosen at random from this bag. What is the probability that they have the same color? Please write your answer as a number (e.g. instead of $C(7,2)$ you would write 21). Please put your answer in the indicated box.

$$\frac{C(4,2)+C(3,2)+C(2,2)}{C(9,2)} = \frac{6+3+1}{36} = \frac{10}{36} = \frac{5}{18}$$

↳ $C(4,2)$ is all ways of choosing 2 green marbles, $C(3,2)$ is all ways of choosing 2 red marbles and $C(2,2)$ is all ways of choosing 2 white marbles.

Answer to #1:
$\frac{5}{18}$

2. Claire flips a coin six times. What is the probability that exactly three of the flips show Heads? You can use our usual notation ($C(n,r), P(n,r)$, or exponents) in your answer, or you can give a numerical answer. Please put your answer in the indicated box.

$$\frac{C(6,3)}{2^6} = \frac{20}{64} = \frac{5}{16}$$

↳ how many ways you can choose which 3 of the 6 flips will be H.

Answer to #2:
$\frac{C(6,3)}{2^6} = \frac{5}{16}$