

## L4 PROBLEM 1 (2/2 points)

1. A fair two-sided coin is flipped 4 times. It comes up heads all four times. What is the probability that it comes up heads on the fifth flip? Answer in reduced fraction form - eg 1/5 instead of 2/10.

**Answer:** 1/2**EXPLANATION:**

Answer: 1/2 - Previous tosses don't influence the result of the next toss.

2. Next we toss a huge ball with 1,000 dots on it. Half the dots are red and the other half are blue. We roll the ball and when it stops, we note the color of the dot on the very top of the ball.

True or False? If we roll it four times, and it comes up red once and blue three times, then we have proved that the ball is biased.

☐ True☒ False**EXPLANATION:**

Answer: False - We don't know if it is a fair or biased ball at this point; the sample size is too small.

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