

## Section 15-1: Empirical Probability

1. 069901a, P.I. A.S.20

A fair coin is thrown in the air four times. If the coin lands with the head up on the first three tosses, what is the probability that the coin will land with the head up on the fourth toss?

[A]  $\frac{1}{16}$     [B]  $\frac{1}{8}$     [C]  $\frac{1}{2}$     [D] 0

2. 010209a, P.I. A.S.20

A fair coin is tossed three times. What is the probability that the coin will land tails up on the second toss?

[A]  $\frac{3}{4}$     [B]  $\frac{1}{3}$     [C]  $\frac{1}{2}$     [D]  $\frac{2}{3}$

3. 060712a, P.I. A.S.20

When a fair coin was tossed ten times, it landed heads up the first seven times. What is the probability that on the eighth toss the coin will land with tails up?

[A]  $\frac{3}{10}$     [B]  $\frac{1}{2}$     [C]  $\frac{3}{7}$     [D]  $\frac{7}{10}$

4. 010709a, P.I. A.S.20

Seth tossed a fair coin five times and got five heads. The probability that the next toss will be a tail is

[A]  $\frac{1}{2}$     [B]  $\frac{1}{6}$     [C]  $\frac{5}{6}$     [D] 0

5. 010832a, P.I. A.S.20

As captain of his football team, Jamal gets to call heads or tails for the toss of a fair coin at the beginning of each game. At the last three games, the coin has landed with heads up. What is the probability that the coin will land with heads up at the next game? Explain your answer.

[1] C

[2] C

[3] B

[4] A

[2]  $\frac{1}{2}$  or an equivalent answer, and an

appropriate explanation is written.

[1] A correct explanation is written, but the probability is not stated.

or [1]  $\frac{1}{2}$  or an equivalent answer, but no

explanation is written.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[5] incorrect procedure.