

NAME: _____

P.I. A2.S.15: Know and apply the binomial probability formula to events involving the term exactly

1. A fair coin is tossed 12 times. What is the probability of obtaining exactly 10 heads?

[A] 0.0029 [B] 0.1208
[C] 0.0161 [D] 0.0537

2. A fair coin is tossed 15 times. What is the probability of obtaining exactly 13 heads?

[A] 0.0032 [B] 0.0005
[C] 0.0417 [D] 0.0139

3. A fair coin is tossed 9 times. What is the probability of obtaining exactly 1 head? Express the answer both in terms of ${}_nC_k$ and as a four-place decimal.

4. A fair coin is tossed 16 times. What is the probability of obtaining exactly 1 head? Express the answer both in terms of ${}_nC_k$ and as a four-place decimal.

5. A fair coin is tossed 12 times. What is the probability of obtaining exactly 1 head? Express the answer both in terms of ${}_nC_k$ and as a four-place decimal.

6. You are going to toss a coin five times. Which has the same probability as $P(5 \text{ tails})$?

[A] $P(2 \text{ heads and } 3 \text{ tails})$
[B] $P(3 \text{ heads and } 2 \text{ tails})$
[C] $P(4 \text{ heads and } 1 \text{ tail})$
[D] $P(5 \text{ heads})$ [E] $P(1 \text{ head and } 4 \text{ tails})$

[1] C

[2] A

[3] ${}_9C_1(.5)^9 \approx 0.0176$

[4] ${}_{16}C_1(.5)^{16} \approx 0.0002$

[5] ${}_{12}C_1(.5)^{12} \approx 0.0029$

[6] D