

THEORETICAL PROBABILITY

Theoretical probability refers to the probability of events in an EXACT world.

If the theoretical probability of events always occurred in the real world, there would be no such thing as “chance”.

Complete each table with the frequency and theoretical probability of each event.

- A. What are the theoretical probabilities of a die landing on each number if the die is rolled forty-two times?

EVENT	FREQUENCY	Theoretical Probability
ONE		
TWO		
THREE		
FOUR		
FIVE		
SIX		

- B. What are the theoretical probabilities of a die landing on each number if the die is rolled 144 times?

EVENT	FREQUENCY	Theoretical Probability
ONE		
TWO		
THREE		
FOUR		
FIVE		
SIX		

C. What are the theoretical probabilities of a coin landing on each event when the coin is tossed eighty-two times?

EVENT	FREQUENCY	Theoretical Probability
Heads		
Tails		

D. What are the theoretical probabilities of a coin landing on each event when the coin is tossed 376 times?

EVENT	FREQUENCY	Theoretical Probability
Heads		
Tails		

E. What are the theoretical probabilities of a sock being chosen from a sack when there are three green socks, six blue socks, eight brown socks, four red socks and three orange socks? The socks are replaced after each event.

EVENT	FREQUENCY	Theoretical Probability
GREEN		
BLUE		
BROWN		
RED		
ORANGE		

- F. What are the theoretical probabilities of a sock being chosen from a sack when there are twenty green socks, six blue socks, five brown socks, fifteen red socks, four white socks, and ten orange socks? One sock is chosen 180 times, being replaced after each event.

EVENT	FREQUENCY	Theoretical Probability
GREEN		
BLUE		
BROWN		
RED		
WHITE		
ORANGE		

- G. What are the theoretical probabilities of a card being chosen from a stack of cards containing one club, six diamonds, two hearts, and nine spades? One card is chosen 80 times and replaced after each event.

EVENT	FREQUENCY	Theoretical Probability