

# Compound Events

## Probability Word Problems - Dependent & Independent Events

Name: \_\_\_\_\_ Date: \_\_\_\_\_

- (1) You accidentally dropped a coin from the top of 11 stairs. What is the probability that it will land on the third step, tails up?
- (2) A bowl of fruit is on the table. It contains 5 apples, 2 oranges, and 4 bananas. Christian and Aaron come home from school and randomly grab one fruit each. What is the probability that both grab oranges?
- (3) An animal cage is holding 4 black cats and 7 white cats. None of them want to be in there. The cage door is opened slightly and two cats escape. What is the probability that the escaping cats are both black?
- (4) A shuffled deck of cards is placed face-down on the table. It contains 8 hearts, 2 diamonds, 3 clubs and 6 spades. What is the probability that the top two cards are both spades?

# Compound Events

Probability Word Problems - Dependent & Independent Events

## ANSWER KEY

- (1) You accidentally dropped a coin from the top of 11 stairs. What is the probability that it will land on the third step, tails up?

$$\frac{1}{11} \times \frac{1}{2} = \frac{1}{22}$$

- (2) A bowl of fruit is on the table. It contains 5 apples, 2 oranges, and 4 bananas. Christian and Aaron come home from school and randomly grab one fruit each. What is the probability that both grab oranges?

$$\frac{2}{11} \times \frac{1}{10} = \frac{2}{110} = \frac{1}{55}$$

- (3) An animal cage is holding 4 black cats and 7 white cats. None of them want to be in there. The cage door is opened slightly and two cats escape. What is the probability that the escaping cats are both black?

$$\frac{4}{11} \times \frac{3}{10} = \frac{12}{110} = \frac{6}{55}$$

- (4) A shuffled deck of cards is placed face-down on the table. It contains 8 hearts, 2 diamonds, 3 clubs and 6 spades. What is the probability that the top two cards are both spades?

$$\frac{6}{19} \times \frac{5}{18} = \frac{30}{342} = \frac{5}{57}$$