

# Compound Events

## Probability Word Problems - Dependent & Independent Events

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

- (1) A shuffled deck of cards is placed face-down on the table. It contains four hearts, five diamonds, three clubs and seven spades. What is the probability that the top two cards are one of the clubs followed by one of the hearts?
- (2) Olivia tossed a die onto a black-and-red checkerboard. What is the probability that it will land with a value of one, on a red square?
- (3) A bowl of fruit is on the table. It contains two apples, six oranges, and four bananas. Joseph and Timothy come home from school and randomly grab one fruit each. What is the probability that both grab apples?
- (4) Samantha wrote a computer program that generates two random numbers between one and ten. When she runs it, what is the probability that the first value will be more than five and the second will be less than four?

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## ANSWER KEY

- (1) A shuffled deck of cards is placed face-down on the table. It contains four hearts, five diamonds, three clubs and seven spades. What is the probability that the top two cards are one of the clubs followed by one of the hearts?

$$\frac{3}{19} \times \frac{4}{18} = \frac{12}{342} = \frac{2}{57}$$

- (2) Olivia tossed a die onto a black-and-red checkerboard. What is the probability that it will land with a value of one, on a red square?

$$\frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$$

- (3) A bowl of fruit is on the table. It contains two apples, six oranges, and four bananas. Joseph and Timothy come home from school and randomly grab one fruit each. What is the probability that both grab apples?

$$\frac{2}{12} \times \frac{1}{11} = \frac{2}{132} = \frac{1}{66}$$

- (4) Samantha wrote a computer program that generates two random numbers between one and ten. When she runs it, what is the probability that the first value will be more than five and the second will be less than four?

$$\frac{5}{10} \times \frac{3}{10} = \frac{15}{100} = \frac{3}{20}$$