

Compound Events

Probability Word Problems - Dependent & Independent Events

Name: _____ Date: _____

- (1) The names of 8 boys and 11 girls from your class are put into a hat. What is the probability that the first two names chosen will both be boys?
- (2) Amber wrote a computer program that generates two random numbers between one and 10. When she runs it, what is the probability that both values will be more than 7?
- (3) The game of backgammon uses two standard dice, each with the numbers one through six. You need to roll double 4s to win the game. What is the probability you will get that result on your next roll?
- (4) A shuffled deck of cards is placed face-down on the table. It contains 7 hearts, 2 diamonds, 8 clubs and 3 spades. What is the probability that the top two cards are one of the diamonds followed by one of the clubs?

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ANSWER KEY

- (1) The names of 8 boys and 11 girls from your class are put into a hat. What is the probability that the first two names chosen will both be boys?

$$\frac{8}{19} \times \frac{7}{18} = \frac{56}{342} = \frac{28}{171}$$

- (2) Amber wrote a computer program that generates two random numbers between one and 10. When she runs it, what is the probability that both values will be more than 7?

$$\frac{3}{10} \times \frac{3}{10} = \frac{9}{100}$$

- (3) The game of backgammon uses two standard dice, each with the numbers one through six. You need to roll double 4s to win the game. What is the probability you will get that result on your next roll?

$$\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$$

- (4) A shuffled deck of cards is placed face-down on the table. It contains 7 hearts, 2 diamonds, 8 clubs and 3 spades. What is the probability that the top two cards are one of the diamonds followed by one of the clubs?

$$\frac{2}{20} \times \frac{8}{19} = \frac{16}{380} = \frac{4}{95}$$