

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 3 hearts, 8 diamonds, 7 clubs and 6 spades. What is the probability that the top two cards are one of the hearts followed by one of the spades?
- (2) You are about to attack a dragon in a role playing game. You will throw two dice, one numbered 1 to 8 and the other with the letters A through G. What is the probability that you will roll a 7 and a E?
- (3) Allison tossed a die onto a black-and-red checkerboard. What is the probability that it will land with a value greater than 3 and on a red square?
- (4) Sarah wrote a computer program that generates two random numbers between one and 8. When she runs it, what is the probability that both values will be more than 3?

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ANSWER KEY

- (1) A shuffled deck of cards is placed face-down on the table. It contains 3 hearts, 8 diamonds, 7 clubs and 6 spades. What is the probability that the top two cards are one of the hearts followed by one of the spades?

$$\frac{3}{24} \times \frac{6}{23} = \frac{18}{552} = \frac{3}{92}$$

- (2) You are about to attack a dragon in a role playing game. You will throw two dice, one numbered 1 to 8 and the other with the letters A through G. What is the probability that you will roll a 7 and a E?

$$\frac{1}{8} \times \frac{1}{7} = \frac{1}{56}$$

- (3) Allison tossed a die onto a black-and-red checkerboard. What is the probability that it will land with a value greater than 3 and on a red square?

$$\frac{3}{6} \times \frac{1}{2} = \frac{3}{12} = \frac{1}{4}$$

- (4) Sarah wrote a computer program that generates two random numbers between one and 8. When she runs it, what is the probability that both values will be more than 3?

$$\frac{5}{8} \times \frac{5}{8} = \frac{25}{64}$$