Compound Events

Probability Word Problems - Dependent & Independent Events

Name: _____ **Date:** _____

(1) 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?

(2) Christina 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 black square?

(3) You accidentally dropped a coin from the top of 12 stairs. What is the probability that it will land below the second step and tails up?

(4) You are about to attack a zombie in a role playing game. You will throw two dice, one numbered 1 to 9 and the other with the letters A through F. What is the probability that you will roll a 6 and a B?

(5) An animal cage is holding 9 black cats and 5 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 white?

(6) The computer repairman is given 8 computers to fix. He knows that among them are 4 bad video cards and 5 failed hard drives. What is the probability that the first computer he tries has both problems?

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A N S W E R K E Y

(1) 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?

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

(2) Christina 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 black square?

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

(3) You accidentally dropped a coin from the top of 12 stairs. What is the probability that it will land below the second step and tails up?

$\frac{10}{12} \times \frac{1}{2} = \frac{10}{24} = \frac{5}{12}$

(4) You are about to attack a zombie in a role playing game. You will throw two dice, one numbered 1 to 9 and the other with the letters A through F. What is the probability that you will roll a 6 and a B?

$\frac{1}{9} \times \frac{1}{6} = \frac{1}{54}$

(5) An animal cage is holding 9 black cats and 5 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 white?

$\frac{5}{14} \times \frac{4}{13} = \frac{20}{182} = \frac{10}{91}$

(6) The computer repairman is given 8 computers to fix. He knows that among them are 4 bad video cards and 5 failed hard drives. What is the probability that the first computer he tries has both problems?

$\frac{4}{8} \times \frac{5}{8} = \frac{20}{64} = \frac{5}{16}$