

CHP 11 study guide

Mr McKernon room 211

VOCAB TO KNOW: Probability, independent and dependent events, permutation and combination, outcomes, odds, favor, experimental probability, factorial.

Roll one dice find:

$$P(2 \text{ or } 3) =$$

$$P(1) =$$

Roll 2 dice:

$$P(\text{sum of } 11) =$$

$$P(\text{sum less than } 9) =$$

$$P(\text{at least one game cube is a } 3) =$$

Bag of marbles with 3 red, 3 blue and 2 green marbles. You pick and then replace:

$$P(B) = \qquad P(R, R, B) =$$

$$P(B, B) = \qquad P(G, G, B) =$$

Bag of marbles with 2 red, 3 blue and 2 green marbles. You pick and then DON'T replace:

$$P(B) = \qquad P(B \mid \text{purple}) =$$

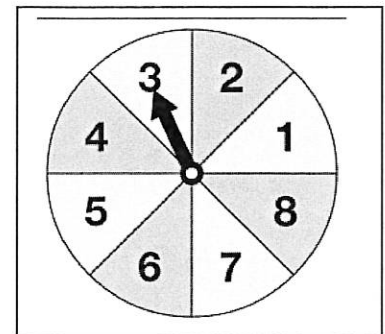
$$P(B \mid B) = \qquad P(G \mid G \mid B) =$$

Use the spinner at right. You spin once find:

$$P(\text{even}) = \qquad P(\text{less than } 5) =$$

$$P(\text{odd or divisible by } 3) =$$

$$P(\text{prime number}) = \qquad P(6 \text{ and } 1) =$$



Permutations and Combinations:

If there are 3 ways from A to B, 4 ways from C to D and 2 ways from B to C, find:

Ways to get from B to D _____ (continued next page)

Ways to get from A to D _____

Ways to get from C to A _____

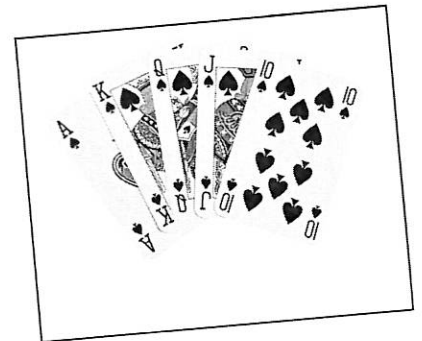
I want to arrange chairs on the pool deck for my family. There are 12 different colored chairs. I want 3 for my family. How many different arrangements can I make?

There are 9 people running in the cross-country meet. If they award 1st, 2nd, 3rd place, how many different ways can they be placed.

If I have 7 different flavors of life savers, but I am only allowed to have 3, how many ways can I chose my 3?

I go to the game store and find out I have won the grand prize. I get to pick 2 free video games out of the 15 new ones they have. How many combinations can I choose from?

How many different ways can I *arrange* 3 of the 5 cards at right?



Simplify the math statement:

$5P5 \times 0.01$

$9P2$

$9C3$

$\frac{10!}{8!}$

$(4C2)(5P2) =$

$(6C2) + (5P3) =$

Dependent Events:

A bag of marbles contains 3 red and 5 blue. You will pick two marbles without replacing them. Find:

$P(B | R) =$

$P(R | B) =$

$P(B | B) =$

$P(R | R) =$

$P(\text{they are the same color}) =$

$P(\text{they are different colors}) =$

Word Problems

Tomorrow has a 35% chance of raining. What are the odds against rain tomorrow?

Tom has a 65% chance of missing the baseball. What are the odds in favor of him hitting the baseball?

The probability of an arrow hitting the bullseye is $\frac{7}{89}$. Find:

The probability of it not hitting the bullseye.

The odds against it hitting the bullseye.

The odds favoring it hitting the bullseye.

Congratulations...you are done!!!