Ch 2.6 Probability and Odds

Probability- is the likelihood that an event will occur.

formula **P(event)** = **#** of favorable outcomes
total number of outcomes

Outcomes are all the different possible results.

Ex1a) P(2) on a six sided dice.

P(even number)

P (a # greater than 4)

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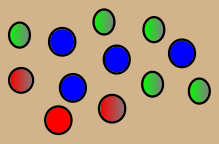
Ex1b) Suppose you have a bag of marbles:
3 Red, 5 Green, and 4 Blue.



P (red)=

P(not green)

Oct 2-8:28 AM

Try: Find the following probabilities for drawing a specific card(s) from a 52 card deck. (4 different suits and 13 in each)

1. P(club)

2. P(Queen)

3.P(King of hearts)

Oct 2-8:38 AM

Ex2) **Odds** - when all outcomes are equally likely that an event will occur.

fomula: **Odds** = #favorable outcomes
#unfavorable outcomes

If given the word MISSISSIPPI:

Ex2a) What are the odds of choosing an I?

What are the odds of choosing an S or a P?

Given a 6 sided dice:

Ex2b) What are odds of rolling a 3?

What are the odds of a # less than 2?

What are the odds ***against*** getting a 4?

Oct 2-8:41 AM

Try #4: What are the odds of drawing a heart in a deck of cards?

Try #5:What are the odds of drawing a 7?

Oct 2-8:46 AM

Ex3) ***Complement*** of an event - consists of all the outcomes not in the event.

P(freshman passing algebra I) = 89%

What is the probability of failing?

P(rains today) = 40%

What is the p(it doesn't rain) =

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Ex4) Finding Experimental Probability

Ex4a) After receiving complains about their skateboards, a manufacturer randomly inspects **1000** skateboards. Of those, **992** had **no defects.** What is the **p(board is defective)**? Write it as a percent?

Ex4b) If the same manufacturer has 8976 skateboards in its warehouse, how many are likely to be defective?

Sep 20-1:52 PM

May 2-2:57 PM