STA 13A
Fourth Week Discussion

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Review on materials covered

Some Important terminology last week

- course website I created (handouts uploaded):
  `http://anson.ucdavis.edu/~liweiwu/courses/STA13A2014FALL/STA13A2014FALL.html`
- union ($A \cup B$), intersection ($A \cap B$)
- complement
$$P(A) + P(A^{\complement}) = 1$$
- additive rule of probability
$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$
- mutually exclusive if $P(A \cap B) = 0$
- conditional probability formula
$$P(A \mid B) = \frac{P(A \cap B)}{P(B)}$$
- multiplicative rule of probability
$$P(A \cap B) = P(A)P(B \mid A)$$
- independent events if
$$P(A \mid B) = P(A) \text{ or } P(B \mid A) = P(B).$$
$$\Rightarrow P(A \cap B) = P(A)P(B)$$
- dependent events if they are not independent

Some Typical Questions

- Refer to Textbook 3.46, 3.50, 3.60, 3.72, 3.84
- Questions on homework if you have any!!! If not, that is the end of class :)