

11.1 - 11.3 11.1 Fundamental Counting Principle

11.2 Permutation

11.3 Combinations

11.4 Fundamentals of Probability

Finding Probabilities,  $0 \leq P(x) \leq 1$

11.5 Probabilities Involving Fundamental Counting Principle and Permutations

11.6 Events involving Not and Or; Odds

$$P(\text{Not } E) = 1 - P(E)$$

If Events are mutually Exclusive or Disjoint

$$P(A \text{ or } B) = P(A) + P(B)$$

If Events are not Mutually Exclusive or Disjoint

$$P(A \text{ or } B) = P(A) + P(B) - P(\text{Both})$$

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odds against unfavorable : favorable

odds in favor favorable : unfavorable.  
in simplest form

Odds against event E are <sup>unfav. fav.</sup> a : b then  $P(E) = \frac{b}{a+b}$   $P(\text{Not } E) = \frac{a}{a+b}$

odds in favor of event are <sup>fav. unfav</sup> c : d then  $P(E) = \frac{c}{c+d}$

Review Problems p. 668-671: 1-6, 18, 19, 23, 25, 29-40, 42-49  
53-78