

## QUICK REVIEW: CLAST SKILL IV.D.2

Solve real-world problems involving probabilities

### Some Guidelines:

\* Complement Rule:  $P(A) = 1 - P(A^C)$

\* General Addition Rule: For any two events, the probability of A or B is  
 $P(A \cup B) = P(A) + P(B) - P(A \cap B)$  [ $P(A \cap B) = 0$  when A and B are disjoint events.]

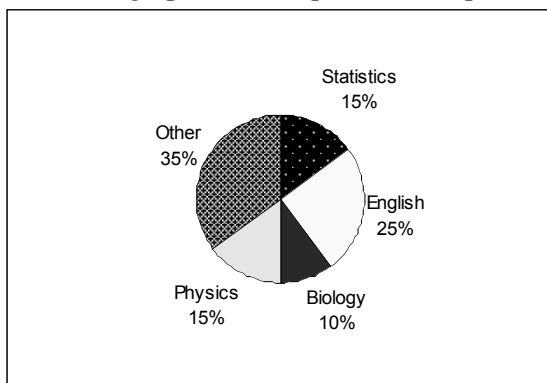
\* General Multiplication Rule: For any two events, the probability of A and B is  
 $P(A \cap B) = P(A) \times P(B | A)$  [ $P(B | A) = P(B)$  when A and B are independent events.]

\* Conditional Probability:  $P(B | A) = \frac{P(A \cap B)}{P(A)}$

The table below shows numbers of hours a week spent working on homework assignments.

<u>Hours per week</u>	<u>Percent</u>	<u>Placement</u>
0.0 - 1.9	10%	Beginning Algebra
2.0 - 3.9	20%	Intermediate Algebra
4.0 - 6.9	35%	Intermediate Algebra
7.0 - 9.9	30%	College Algebra
10.0 - 19.9	5%	PreCalculus

- Find the probability that a randomly chosen student spent between 7.0 to 19.9 hours a week.  
a) 0.03      b) 0.3      c) 0.7      d) 0.35
- Find the probability that a randomly chosen student spent less than 7.0 hours a week.  
a) 0.65      b) 0.35      c) 0.95      d) 0.35
- Find the probability that the student chosen is placed into Intermediate Algebra, given that he or she spent at least 4.0 hours a week on working on homework assignments.  
a) 0.35      b) 0.70      c) 0.5      d) 0.55
- The circle graph below represents the percentages of courses taken by a group of students.



If two students are randomly selected from this group of students, find the probability that both of them took Biology last Summer.

- a) 0.10      b) 0.20      c) 0.50      d) 0.01