13.1 & 13.2 Honors Advanced Algebra   DATE: _____

Do you get it?

Draw a sample space diagram to represent the scores when two standard dice are thrown. Find the probability of:

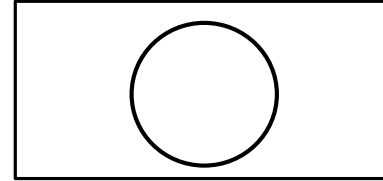a)   obtaining a score of 6   b)   throwing a double   c)   score < 6

Recall: If E represents an event and E^c represents the complement of an event, then

Visually, a Venn Diagram can be used to represent the situation.

Problem: According to the National Gambling Impact Study Commission, 52% of Americans have played state lotteries. What is the probability that a randomly selected American has not played a state lottery?

Problem: The data in Table 7 represent the income distribution of households in the United States in 2006.

Table 7			
Annual Income	**Number (in thousands)**	**Annual Income**	**Number (in thousands)**
Less than $10,000	8,899	$50,000 to $74,999	21,222
$10,000 to $14,999	6,640	$75,000 to $99,999	13,215
$15,000 to $24,999	12,722	$100,000 to $149,999	12,164
$25,000 to $34,999	12,447	$150,000 to $199,999	3,981
$35,000 to $49,999	16,511	$200,000 or more	3,817

Source: U.S. Census Bureau

(a) Compute the probability that a randomly selected household earned $200,000 or more in 2006.

(b) Compute the probability that a randomly selected household earned less than $200,000 in 2006.

(c) Compute the probability that a randomly selected household earned at least $10,000 in 2006.