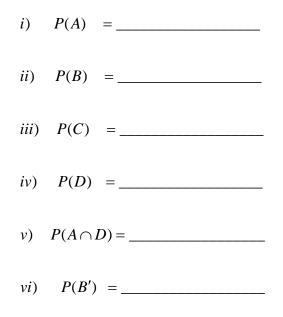
- 1. Consider the following: "Three children are born to a family and the order of the births with respect to gender are noted."
 - a) Write out the sample space for this "experiment" [One possible outcome is BBG (meaning the oldest child is a boy, the middle child is a boy, and the youngest child is a girl.)]
 - b) Write out, using proper set notation, each of the following events.
 - i) A is the event of having more girls than boys.
 - ii) B is the event that exactly two children are boys.
 - iii) C is the event that all children are of the same gender.
 - iv) D is the event that the oldest child is a girl and the youngest child is a boy.
 - c) Using the events defined in part b) and assuming births of boys and girls to be equally likely, determine each of the following probabilities. (In parts v and vi, first determine events $A \cap D$ and B'.)



2.	If a nickel, a dime, and a quarter are tossed, find the probability of obtaining	
	a) no heads	a)
	b) at least one head	b)
	c) exactly 2 heads	c)
3. Assume an urn contains 5 white chips and 10 black chips.		
	a) If you draw 1 chip randomly from the urn, determine the probability that the chip	
	i) is white	i)
	ii) is not white	ii)
	b) If 5 chips are drawn, all at one time (without replacement), determine the probability that	
	i) exactly 2 are white and 3 are black	i)
	ii) all 5 drawn chips are black	ii)
4.	Suppose you roll a die and note the dots that show. Let A be the event "that the number of dots showing is a multiple of 3".	
	i) Calculate the odds against event A.	i)
	ii) Calculate $P(A)$	ii)
5. If the probability that you will win a door prize at a certain event is $\frac{3}{100}$, what is the probability will not win a door prize?		-, what is the probability that you
	will not win a door prize?	
6.	5. Assume you draw one card from a standard deck of cards. Let H be the event of drawing a heart and J be the event of drawing a "jack". Calculate each of the following probabilities.	
	a) $P(H) =$	a)
	b) $P(J) =$	b)
	c) $P(H \cap J) =$	c)
	$d) P(H \cup J) =$	d)
	e) Does $P(H \cup J) = P(H) + P(J)$? Why are why not?	