POS 3713 Fall 1999
Homework #3
Due Tuesday, 10/26/99

		Party Identification		
		Democrat	Republican	Independent
	Jewish	15	20	0
Religion	Catholic	20	30	10
	Protestant	10	50	20

1. Calculate the index of qualitative variation (IQV) for party identification and religion in the table above. What does each IQV value tell you about the dispersion of these two variables?

2. David Duval is a professional golfer. He is interested in measuring the central tendencies and variation of his golf scores. He plays 18 holes of golf 10 days in a row and records the following scores.

70 74 69 79 72 68 69 71 73 75

a. What is his mean golf score?
b. What is his median golf score?
c. What is his mode score?
d. What is the range of his golf scores?
e. What is the variance of his golf scores?
f. What is the standard deviation of his golf scores? How do you interpret the standard deviation?

3. You administer a standard IQ test in POS 3713 and the mean is equal to 100 and the standard deviation is 16. Assume that IQ scores are normally distributed.

a. Steve obtained a score of 130 on the test. What *percent* of cases fall between Steve's score and the mean? (Draw the normal curve and shade the area you are looking for.)
b. What is Steve's *percentile rank* in the population?
c. What *proportion* of cases fall between a score of 110 and 80? (Draw the normal curve and shade the desired area.)
d. What *percent* of cases fall between a score of 75 and 95? (Draw the normal curve and shade the desired area.)

4. Answer the questions below using the information provided.

Theoretical Hypothesis: Women are more likely to identify with the Democratic party because it is more sensitive to issues that women care about, such as education, abortion (a pro-choice position), and family issues (such as maternal leave).

Data: Survey data from the 1994 National Election Study (N=1795, but some cases have been dropped for this analysis)

		Party Identification		
Sex	Republican	Independent	Democrat	Total
Male	273	269	244	786
Female	271	244	368	883
Total	544	513	612	1669

a. What is the independent variable for this theory? What is the dependent variable?
b. What *percentage* of the total sample is female?
c. What *proportion* of the total sample is Democratic?
d. How many females in this sample identify with the Republican party (i.e., what is the frequency)?
e. Does the table provide any evidence to support the theoretical hypothesis? Justify your answer using the information presented.