Practice Problems

Use the table shown below to answer questions 1 through 5.

	Projected Number of Degrees Granted in the U. S. for 2011	
	Total Degrees Projected: 1,906,100	
	Women	Men
B. A. Degree	824,000	568,000
Master's Degree	287,000	178,000
Ph.D.	21,500	27,600
Total	1,132,500	773,600

Data Source:
U. S. Department of Education (Aug. 2001)
National Center for Education Statistics
"Projections of Education Statistics 2011"
Publication #NCES 2001083

1. Based on the total degrees projected, what is the probability that a degree will be granted to a man?

2. Based on the total degrees projected, what is the projected probability that a degree will be granted to a woman?

3. Based on the total degrees projected, what is the probability that a woman will be granted either a B. A. Degree or a Master's Degree?

4. Based on the total degrees projected, what is the probability that a man will be granted either a B. A. or a Master's Degree?

5. Based on the total degrees projected what is the probability that a student will be granted a Ph.D. degree ?

6.   An industrial psychologist gives a social affiliation test to 10 new employees of Abbey Do Company to determine how much they enjoy working with others. The social affiliation scores for the population of all workers has a mean of 25.00 with a standard deviation of 5. Determine if the new employees differ from the company population in terms of social affiliation.

Social affiliation scores

20
25
30
25
35
30
20
15
25
30

7. A local high school surveyed students and measured the extent of their tendency to conform to others on a scale of 1 to 7.   Higher scores indicate a stronger tendency to conform. The mean score for students at this high school is 6 with a standard deviation of 2.   Dr. V believes his students are very independent and rebellious. He measures the conformity of his students to see if they differ from the other high school students. The following scores are the conformity scores of his class sample of students. Determine if these students differ from the population.

Number of conforming
answers

5
4
3
7
5
4
3
10
7
4