1. Maxforce, Inc. manufactures racquetball racquets at two different factories (A and B). Testing whether there is a difference between the average times it takes each factory to produce a racquet. You randomly selected independent samples from each factory. The results of the samples are shown below.

	Factory A	Factory B	
Sample Size	32	35	a. State the null and the alternative hypotheses.
Sample Mean	43	47	
Sample Variance	64	70	

a. State the null and the alternative hypotheses.
b. At $\alpha = .01$, find the critical value(s).
c. Are the assumptions of the test satisfied?
d. Compute the point estimate of the difference.
e. Compute the standard error
f. Compute the test statistic.
g. What is the conclusion of the test statistic?

2. A test was given to a group of individuals before and after a film on the history of the world was presented. The results are given below. At $\alpha = .05$, test to determine if the film increased test scores. (For the following matched samples, let the difference "d" be d = after - before.)

Individual	After	Before
1	92	89
2	86	88
3	89	84
4	89	94
5	93	85
6	88	90
7	97	91

a. State the null and the alternative hypotheses.
b. At $\alpha = .01$, find the critical value(s).
c. Are the assumptions of the test satisfied?
d. Compute the point estimate of the difference.
e. Compute the standard error
f. Compute the test statistic.
g. What is the conclusion of the test statistic?