1. Briefly answer the following questions:
(a) What is the difference between descriptive statistics and inferential statistics?
Descriptive – the part of statistics *describing and summarizing* data.
Inferential – the part of statistics concerned with *drawing conclusions* from data.

2. Lets review some math:
(a) The first edition of a textbook contained 600 exercises. For the revised edition, the author removed 50 of the original exercises and added 350 new exercises. Complete each of the following statements.
• There are **900** exercises in the revised ed.
• There are **300** more exercise in the revised ed. than the 1*st* ed.
• There are (**900-600)/600 = 50**% more exercises in the revised ed. than in the 1*st* ed.
• **350/900 = 38.9**% of exercises are new.

(b) Assume 25% of the deer population is infected with TB. Suppose the total population is reduced by 10% by recurring annual methods. If the initial population was 100, 000, how many infected deer are left? (Assume that the reduction methods operate independently of infection.)
100 000 x 0.25 = 25 000 infected
100 000 x 0.10 = 10 000 die in one year, not necessarily from TB
100 000 x 0.25 x (1-0.10) = 22 500 still infected after one year.

3. Some of your fellow students have shown concern about the lack of available space to do private study. You have been asked to represent them in approaching the Principal in order to press for some improvement in appropriate study space. Before you do this you want to be sure that you are representing a majority view, not just the feelings of a few 'complaining' individuals. Describe a proper sampling strategy.
Want to collect data (opinions on available study space) from whole student population.
Choose an informative sample (subgroup) of the student population.
How/Where can one obtain a sample where every student is equally likely to be asked their opinion?
Simple random sampling - names selected randomly from the school registry.
Stratified random sampling (when there are suspected differences in opinion between years) – names grouped by year and samples taken proportional to percentage of entire student population represented by each group.

4. (a) the highest grade. **97**
(b) the grades of the five lowest ranking students. **60, 60, 59, 57, 53**
(c) the grade of the student ranking tenth highest. **88**
(d) how many students received grades of 75 or higher. **44**
(e) how many students received grades below 85. **63**
(f) what percentage of students received grades higher than 65 but not higher than 85. **49/80*100 = 61.25%**
(g) which grades did not appear at all. **1-52, 54-56, 58, 64, 70, 91, 92, 98, 99, 100**

1	**97**	**88**	**82**	**78**	**75**	**73**	**67**	**62**
2	**96**	**88**	**81**	**77**	**75**	**72**	**67**	**62**
3	**95**	**87**	**80**	**77**	**75**	**72**	**66**	**61**
4	**95**	**86**	**79**	**76**	**75**	**71**	**65**	**61**
5	**94**	**85**	**79**	**76**	**74**	**71**	**65**	**60**
6	**93**	**85**	**79**	**76**	**74**	**71**	**65**	**60**
7	**93**	**85**	**78**	**76**	**74**	**69**	**63**	**60**
8	**90**	**84**	**78**	**75**	**73**	**68**	**63**	**59**
9	**89**	**83**	**78**	**75**	**73**	**68**	**62**	**57**
0	**88**	**82**	**78**	**75**	**73**	**68**	**62**	**53**
	10	*20*	*30*	*40*	*50*	*60*	*70*	*80*