1. The life expectancy of mice is normally distributed with a mean of 16.4 months and a standard deviation of 3.2 months.

1. What proportion of mice live longer than 20 months?
2. What proportion of mice live between 14.1 months and 22.4 months?
3. What proportion of mice live less than a year?

2. The mean on the first Geography test was 72.4 and the standard deviation was 7.4.

The mean on the first Algebra test was 75.1 and the standard deviation was 5.1. Both tests were approximately normally distributed.

1. Jimmy scored a 70 on both tests. On which test can it be said he earned a higher score? Justify your answer using Normal calculations.
2. Molly scored in the 98th percentile on the Geography test. What is the lowest grade she could have made?
3. Oscar scored better than 45 percent of the students on the Algebra test. What z-score would be associated with his grade?
4. Katie wants to score in the top 25% on all tests in Geography. What did she need to score on the first test to meet her goal?
5. What proportion of students made an A on the Algebra test?
6. What proportion of students made a B on the Geography test?

3. A study was completed to tabulate the number of soft drinks high school students drink in a week. The data was found to be normally distributed with a mean of 21 and a standard deviation of 4.

 a) Approximate the percentage of students who drink more than 25 soft drinks in a week

 b) Approximate the percentage of students who drink between 13 and 29 soft drinks in a week.

 c) Approximate the percentage of students who drink between 13 and 17 soft drinks in a week.

 d) What range of soft drinks represents the middle 68% of the data?