According to the Centers for Disease Control, the mean total cholesterol level for men between the ages of 20 and 29 is 180 micrograms per deciliter with a standard deviation of 36.2. A healthy cholesterol level is less than 200, 200 – 240 is borderline, and above 240 is dangerous. Assume the distribution is approximately Normal.

1. What proportion of men (age 20 – 29) have total cholesterol levels below 200 (i.e., have a healthy cholesterol level)?
2. What proportion of men (age 20 – 29) have total cholesterol levels of 240 or more (i.e., in the dangerous levels)?

1. What proportion of men have total cholesterol levels between 200 and 240 (i.e., in the borderline range)?
2. What total cholesterol level corresponds to the 20th percentile?
3. The men with the highest 10% of total cholesterol levels have levels above what value?
4. What values cut off the middle 80% of cholesterol levels?
5. Find Q1 of the cholesterol distribution.
6. Find the IQR of cholesterol levels for 20 – 29 year old men.

The Banana Slug, *Arilomax californicus,* lives among the forest litter of the West coast from California to British Columbia. It is also the mascot of the University of California, Santa Cruz. Assume that Banana Slugs lay an average of 14 eggs at a time, with a standard deviation of 4, and that the number of eggs per batch is normally distributed.

1. What proportion of batches have 16 or more eggs?
2. What proportion of batches have between 8 and 12 eggs?
3. What proportion of batches have fewer than 6 eggs?
4. What number of eggs corresponds to the 80th percentile?
5. What number of eggs corresponds to the 10th percentile?
6. What number of eggs corresponds to Q1?
7. The largest 10% of batches have what number of eggs?
8. Approximately what proportion of batches have exactly 10 eggs?