Name $\square$


Percent

Complete.

1. There is a herd of ibex (kind of like antelope) out on the range. Forty-eight percent of the ibex are male. If the herd consists of 1,036 individuals, how many are female?
2. A particular species of bird weights about thirty-one grams when born. If its weight increases by twelve percent a day, how much will it weigh on the fourth day of its life?

## Complete.

3. The initial population of protists in a culture is 4,893 . The final population after one week was 8,126 . The population increased by what percent over the week? Round your answer to the nearest hundredth of a percent.
4. Brianna is performing an experiment using gel electrophoresis. She is monitoring the migration of RNA through the gel. The shortest fragments of RNA have traveled 4.3 cm through the gel and the longest fragments have traveled only 2.6 cm . The longest fragments have traveled what percent of the distance of the shortest fragments? Round your answer to the nearest hundredth of a percent.

## Complete.

5. The old mine near Smallville used to produce a lot of silver ore. The ore deposit has been pretty much depleted now though. Today the ore removal is only about $20 \%$ of what is was 30 years ago. If an average of 2.8 million tons per year were removed 30 years ago, what is the current ore removal rate? Express your answer using scientific notation.
6. A geyser (Big Bill they call it) in Thermal Park erupts a column of water 20 feet high every 14 minutes. Another geyser in the park (called Mighty Joe) erupts a column 80 feet high every 22 minutes. The eruption cycle of Mighty Joe is what percent longer than that of Big Bill? Round your answer to the nearest hundredth of a percent.

## Complete.

7. It is an interesting fact that the total volume of two liquids can change when the liquids are mixed together. This is because of a change in the intermolecular forces that attract or repel the individual liquid molecules from each other. Savannah repeats a classic experiment where she mixes one liter of pure water with one liter of pure ethanol and measures the volume of the combined liquids. She records the new volume to be 1.83 liters. The volume decreased by what percent? Round your answer to the nearest hundredth of a percent if needed.
8. Two objects are suspended 4 meters in the air by a string. One object has a mass of 4 kg and the other has a mass of 4.61 kg . What is the difference in potential energy of the two objects expressed as a percent? Round your answer to the nearest hundredth of a percent if needed.

## Complete.

9. Sydney performed an analysis on some water from Bigtown Lake. She tested three samples and found the lead concentrations to be in parts per million (micrograms per milliliter or mg per liter) to be $0.036,1.01$, and 1.047 respectively. What was the average mass of lead? Round your answer to the nearest thousandth.
10. Jonathan and Savannah were working as partners on a chemistry experiment. They had just synthesized a white crystalline compound that precipitated to the bottom of the beaker. They weighed the compound (after drying it) and found they had 6.15 grams. According to their instructor the maximum yield for the experiment was 8.6 grams. What percent of the maximum did they achieve? Round your answer to the nearest hundredth of a percent.

## Complete.

11. Emily is a good scorer for her soccer team. She scored 10 goals during regular play, and she scored 2 on penalty kicks. What percent of her goals did not result from penalty kicks? Round your answer to the nearest tenth of a percent.
12. If a football team earned $53.7 \%$ of its yardage on passing plays and had a total of 2215 yards for the year, how many yards did it gain on running plays? Round your answer to the nearest tenth.
