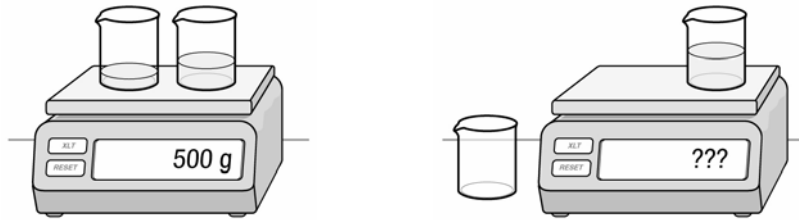


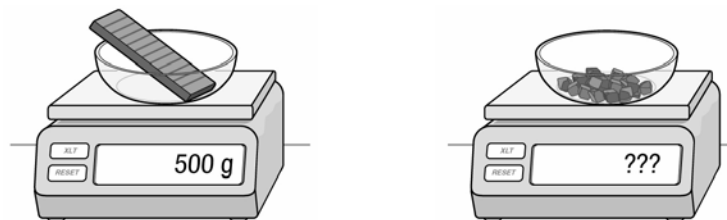
## InterActions Unit 4 Chapter 1 Sample Quiz

See the Scientists' Consensus Sheets for assistance.

1. Imagine you have two beakers of 100 g each. You pour 100 g of water in one beaker and 200 g of vinegar in the second beaker. Placing both containers on the scale you measure 500 g. You pour the water in with the vinegar and measure the mass of the beaker of liquid. You measure approximately

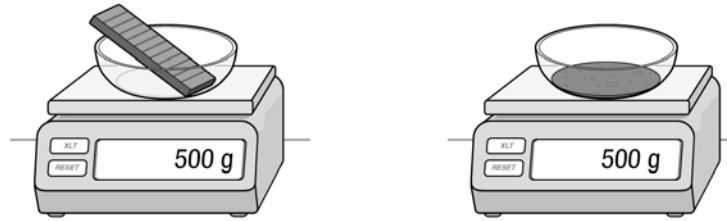


- a. 500 g.
  - b. 400 g.
  - c. 300 g.
  - d. 200 g.
2. Imagine you have a 500 g bar of chocolate that you chop to make chocolate chip cookies. After chopping the bar into small pieces you put all the pieces on a scale. The scale measures



- a. Less than 500 g
- b. More than 500 g
- c. 500 g
- d. It is impossible to know.

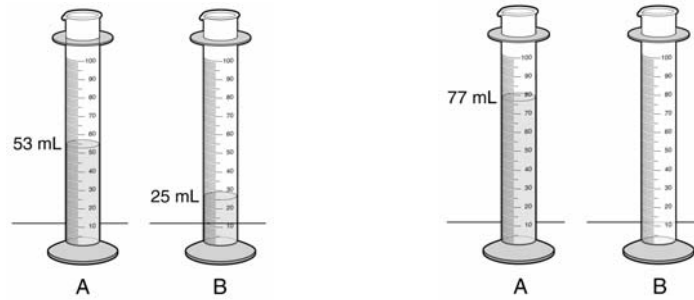
3. Imagine you have a 500 g bar of chocolate that you melt. After melting you measure the mass of the melted chocolate. The scale measures



- a. Less than 500 g
  - b. More than 500 g
  - c. 500 g
  - d. It is impossible to know.
4. During an interaction in a closed mass system, the volume
- a. always increases.
  - b. always decreases.
  - c. always stays the same.
  - d. may increase, decrease, or stay the same.

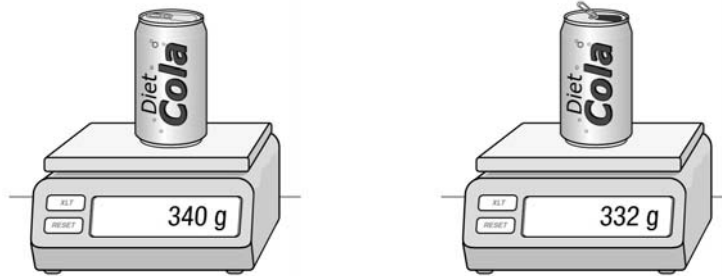
5. You are making jello. After mixing the ingredients you pour the liquid in a bowl, cover it tightly, and place it in the fridge. In a short time it becomes a solid. The mass of the solid jello is
- a. Greater than the mass of the liquid.
  - b. The same as the mass of the liquid.
  - c. Less than the mass of the liquid.
  - d. There is no way to tell.
6. To make a cup of tea you place 1 cup of water in a pot and bring it to boil. After you have boiled the water you have \_\_\_\_\_ of water left.
- a. less than a cup
  - b. a cup
  - c. more than a cup
  - d. There is no way to tell.
7. You pump air into your volleyball ball. The ball's mass
- a. decreases
  - b. increases
  - c. stays the same
  - d. There is no way to tell.

8. Someone mixes two liquids together. Liquid A has a volume of 53 mL. Liquid B has a volume of 25 mL. When these liquids are mixed together the volume is measured to be 77 mL. The uncertainty in the measurement is 2 mL. You cannot conclude the volume decreases because



- a. the decrease in volume is less than the uncertainty
- b. the decrease in volume is greater than the uncertainty
- c. the decrease in volume is equal to the uncertainty
- d. the decrease in volume has nothing to do with the uncertainty in the measurement.
9. Minal mixes in a large bowl 500 g of flour with 25 g of water and 50 g of butter to make dough. She then takes out 10 g to test. How much dough is left in her bowl.
- a. 585 g
- b. 575 g
- c. 565 g
- d. 560 g.

10. Some students decided to do an experiment with a can of soda. They opened a 340 g can of soda and left it open for a day. They then measured the soda can and found it was 332 g. The uncertainty in the measurement was 2 g. They then poured some of the soda in a glass and observed that it was no longer fizzy.



Analyze and Explain why the soda has less mass after it has gone flat.