

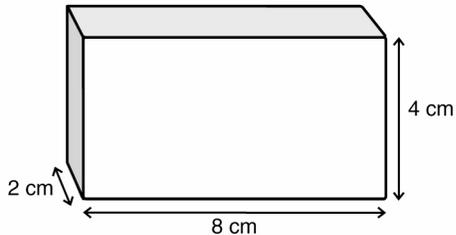
InterActions Unit 1 Cycle 3 Sample Exam

For the best review, make sure you review all the sample quizzes from the unit. Unit exams are comprehensive, this sample quiz is not completely comprehensive, rather it focuses mainly on ideas learned in Cycle 3.

1. A characteristic property is
 - a. a measurable property that is unique about the object such as its mass and volume.
 - b. a measurable property that tells you something about the object such as its color and shape.
 - c. any property that describes the object.
 - d. a measurable property that is unique about the material the object is made of.

2. Calculate the volume of the rectangular solid shown (width=8 cm, height = 4 cm, depth = 2 cm)

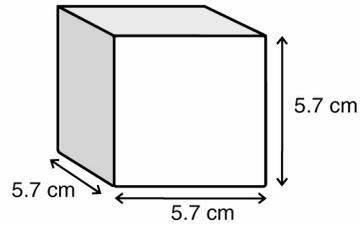
- a. 24 cm^3 .
- b. 16 cm^3 .
- c. 8 cm^3 .
- d. 64 cm^3 .



- e. There is not enough information to determine an answer.

3. Don has a block of mass 500 g and width, height, and depth of 5.7 cm each. Using the table of densities, what is the block made of?

- a. Antifreeze
- b. Salt water
- c. Tin
- d. Aluminum
- e. Acetic Acid



4. Possible evidence for an interaction between two objects of like electric charge (either both positive or both negative) is

- a. one object moves away from the other
- b. one object moves toward the other
- c. neither repel nor attract
- d. There is not enough information to answer the question.

5. Electrically charged objects

- a. always attract uncharged objects
- b. sometimes attract uncharged objects
- c. neither repel nor attract uncharged objects
- d. There is not enough information to answer the question.

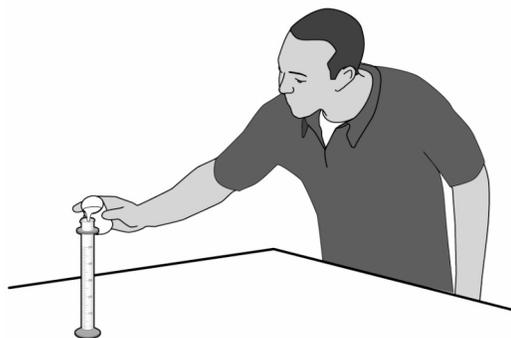
6. Magnets

- a. attract all metal objects
- b. attract some metals objects
- c. neither repel nor attract metal objects
- d. There is not enough information to answer the question.

7. To make an electromagnet you could

- a. electrically charge a magnet by rubbing it with a piece of cloth.
- b. magnetize an electrically charged object by rubbing it with a piece of cloth.
- c. connect a magnet in a closed electric circuit with a battery
- d. connect a magnetic material in a closed electric circuit with a battery.
- e. coil a wire around magnetic material and connect it in a closed circuit with a battery.

8. Officer Brown has discovered some unknown liquid at the scene of a crime. He wishes to determine what it is. He collects 3 g of the liquid and places it in a graduated cylinder. The volume of the liquid is 2.68 cm^3 . What is the liquid?



9. Amalie is trying to determine what two wires are made of, and whether or not they are made of the same material. She measures the electrical conductivity of the wires and determines the electrical conductivity of the wires to be 995 mA and 996 mA. She then calculates the uncertainty in her measurements to be 1 mA. Hence one wire has an electrical conductivity between 994 and 996 mA, and the other between 995 and 997 mA. From the electrical conductivity alone she can only determine that these wires may be made of tin or copper. What can Amalie do to determine what the two wires are made of?