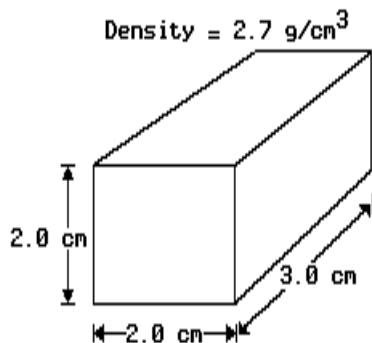


Name: _____

- 1) The diagram below represents a solid material of uniform composition.



Which statement about this object is an inference?

- A) The object is longer than it is wide.
 B) the object has flat sides.
 C) The object is made of a naturally occurring substance.
 D) The object has sharp corners.
- 2) Using a ruler to measure the length of a stick is an example of
- A) predicting the length of the stick by guessing
 B) measuring the rate of change of the stick by making inferences
 C) calculating the percent of error by using a proportion
 D) extending the sense of sight by using an instrument
- 3) A number of objects are grouped on the basis of common properties. What is this process called?
- A) observation C) inference
 B) classification D) measurement
- 4) Which property was probably used to classify the substances below?

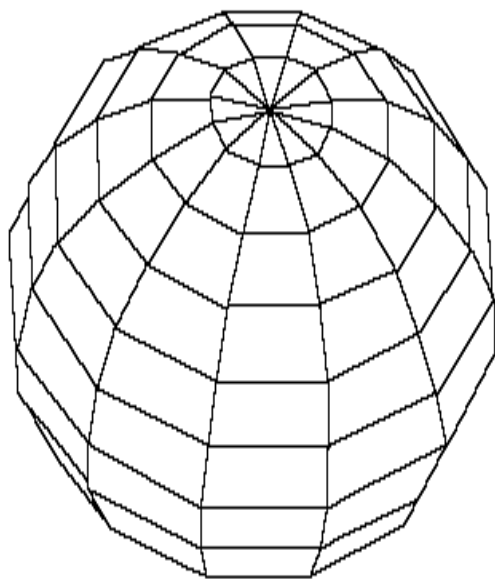
<u>Group A</u>	<u>Group B</u>
water	aluminum
gasoline	ice
alcohol	iron

Group C
 water vapor
 air
 oxygen

- A) abundance within the Earth
 B) specific heat
 C) state (phase) of matter
 D) chemical composition

- 5) Which statement about a cumulus cloud seen over Syracuse, N.Y., is an inference?
- A) The cloud has an irregular shape.
 B) The cloud formed over Lake Ontario.
 C) The cloud appears white.
 D) The base of the cloud is determined to be 2.6 km above ground.
- 6) An interpretation based upon an observation is called
- A) a fact C) a measurement
 B) a classification D) an inference
- 7) Scientists often use classification systems in order to
- A) extend their powers of observation
 B) make direct comparisons with standard units of measurement
 C) make more accurate interpretations
 D) organize their observations in a meaningful way
- 8) A student observed a freshly dug hole in the ground and recorded statements about the sediment at the bottom of the hole. Which statement is an inference?
- A) The sediments were deposited by a stream.
 B) Over 50% of the sediments are the size of sand grains or smaller.
 C) Some of the particles are rounded.
 D) The hole is 2 meters deep.
- 9) In the classroom during a visual inspection of a rock, a student recorded four statements about the rock. Which statement about the rock is an observation?
- A) The rock cooled very rapidly.
 B) The rock is black and shiny.
 C) The rock formed deep in the Earth's interior.
 D) The rock dates from the Precambrian Era.
- 10) A measurement is best defined as
- A) a direct comparison with a known standard
 B) an interpretation based on theory
 C) an inference made by using the human senses
 D) a group of inferred properties

- 11) The diagram below represents a three-dimensional solid object of uniform material.



MASS = 80.0 grams

VOLUME = 25 cm^3

The object appears to have many flat surfaces, most of which are four-sided. This statement is best described as

- A) an inference C) a measurement
 B) an observation D) a prediction
- 12) Which statement about a rock sample is an inference?
- A) The rock was formed 100 million years ago.
 B) The rock has no visible crystals and is red.
 C) A balance indicates the rock's mass is 254 grams.
 D) The rock scratches a glass plate.

- 13) The grouping of objects or events based on similar characteristics is called
- A) measurement C) observation
 B) classification D) interpretation
- 14) A classification system is based on the use of
- A) the human senses to observe properties of objects
 B) instruments to observe properties of objects
 C) observed properties to group objects with similar characteristics
 D) inferences to make observations
- 15) While on a field trip to a large lake in New York State, an observer recorded four statements about this lake. Which of these statements is most likely an inference?
- A) A log is floating in the lake.
 B) The lake was formed by glacial action.
 C) The water is clear enough to see the bottom of the lake.
 D) The surface temperature of the lake is 18.5°C.
- 16) A prediction of next winter's weather is an example of
- A) a measurement C) a classification
 B) an inference D) an observation
- 17) Which statement about a burning candle is most likely an inference?
- A) Carbon dioxide and water vapor are produced by the burning.
 B) The wick gets shorter as the candle burns.
 C) The candle wax is melting.
 D) The flame is yellow.