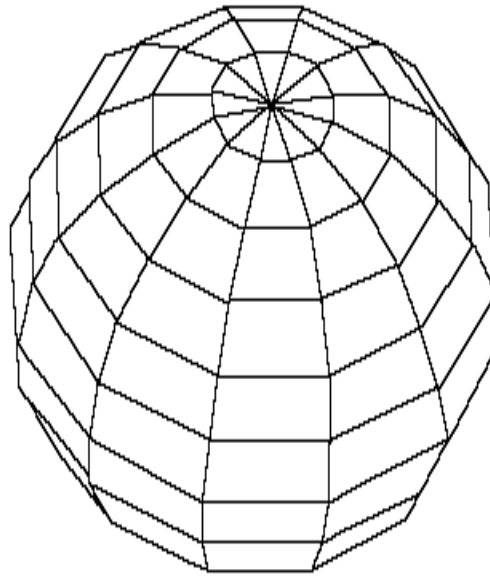


Name: _____ Period: ____ Date: _____

WS Observations & Inferences

- ___ 1) An interpretation based upon an observation is called
- A) a classification
 - B) an inference
 - C) a fact
 - D) a measurement
- ___ 2) A prediction of next winter's weather is an example of
- A) a measurement
 - B) a classification
 - C) an inference
 - D) an observation
- ___ 3) Which statement about a burning candle is most likely an inference?
- A) The wick gets shorter as the candle burns.
 - B) The flame is yellow.
 - C) Carbon dioxide and water vapor are produced by the burning.
 - D) The candle wax is melting.
- ___ 4) Which statement about a rock sample is an inference?
- A) The rock has no visible crystals and is red.
 - B) The rock scratches a glass plate.
 - C) The rock was formed 100 million years ago.
 - D) A balance indicates the rock's mass is 254 grams.
- ___ 5) 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 dates from the Precambrian Era.
 - D) The rock formed deep in the Earth's interior.
- ___ 6) Using a ruler to measure the length of a stick is an example of
- A) calculating the percent of error by using a proportion
 - B) predicting the length of the stick by guessing
 - C) extending the sense of sight by using an instrument
 - D) measuring the rate of change of the stick by making inferences
- ___ 7) 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) Over 50% of the sediments are the size of sand grains or smaller.
 - B) The hole is 2 meters deep.
 - C) The sediments were deposited by a stream.
 - D) Some of the particles are rounded.

- ___ 8) The diagram below represents a three-dimensional solid object of uniform material.



MASS = 80.0 grams

VOLUME = 25 cm³

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

- A) a measurement
 B) an observation
 C) an inference
 D) a prediction

Questions 9 and 10 refer to the following:

The table below shows data for a student's collection of rock samples *A* through *I*, which are classified into groups *X*, *Y*, and *Z*. For each rock sample, the student recorded mass, volume, density, and a brief description. The density for rock *D* has been left blank.

Rock Collection

Group	Rock	Mass (g)	Volume (cm ³)	Density (g/cm ³)	Description
X	A	82.9	34.4	2.41	Grey, smooth, rounded
	B	114.2	42.6	2.68	Brown, smooth, rounded
	C	144.7	63.2	2.29	Black, smooth rounded
Y	D	159.4	59.7		Black and grey crystals, angular
	E	87.7	33.1	2.65	Clear and pink crystals, angular
	F	59.6	21.0	2.84	White, grey, and black crystals, angular
Z	G	201.1	68.4	2.94	Grey, shiny, flat
	H	85.1	39.8	2.14	Brown, sandy feel, flat
	I	110.2	47.3	2.33	Dark grey, flaky, flat

- ___ 9) To obtain the data recorded in the column labeled "Description," the student used
- A) a triple-beam balance
 B) her senses
 C) a calculator
 D) an overflow can
- ___ 10) Which statement is an inference rather than an observation?
- A) Rock *G* is the same color as rock *I*.
 B) Rock *E* has a volume of 33.1 cm³.
 C) Rock *H* is flat.
 D) Rock *B* has been rounded by stream action.