

TRUE or FALSE

- 1) _____ Science attempts to organize and explain, in a systematic and logical manner, knowledge about our physical surroundings including our universe, our earth and ourselves.
 - 2) _____ Boundaries between the scientific disciplines, like chemistry, biology and physics are very rigid.
 - 3) _____ Analyze and organize data to make a general statement that explains an observation is what a theory is.
 - 4) _____ The base metric quantity for mass has the symbol “m” and is called a meter.
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Classify each of the following as an EXACT (E) or MEASURED (M) number..

- 5) 7 railroad cars _____
 - 6) 14 gallons of gasoline _____
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7) **If the accepted value for the length of an object is 6.78 cm, which of the following sets of experimental results is best described as both PRECISE AND ACCURATE? Circle the correct answer.**

- A) 6.88 cm, 6.88 cm, 6.58 cm (average = 6.78 cm)
- B) 6.79 cm, 6.78 cm, 6.77 cm (average = 6.78 cm)
- C) 6.71 cm, 6.71 cm, 6.72 cm (average = 6.71 cm)
- D) 6.78 cm, 6.38 cm, 6.48 cm (average = 6.55 cm)

8) **Which one of the following numbers contains 4 significant figures? MARK all that apply.**

- A) 0.0257 B) 3.090 C) 39.40 D) 9200 E) 6.43

Write the UNCERTAIN DIGIT and the UNCERTAINTY (\pm) in each of the following measurements.

9) 30 oz _____

10) 3,275 mL _____

11) The kelvin, which has an abbreviation of _____, is the accepted SI base unit for _____.

12) Complete the following relationships between units.

a. _____ g = 1 Gg

d. _____ mL = 1 cm

b. _____ L = 1 μ L

e. _____ Mg = 1 t (t = metric ton)

Write the value and the uncertainty (\pm) of the following measurements.

13) _____ length?

