

1.2 Review Questions

1. Why is it important to have a set of standards for measuring?

2. How many significant figures are in the following?

- a. 872346 miles _____
- b. 0.0000412 pounds _____
- c. 1001 kilograms _____
- d. 1.00234seconds _____
- e. 10 gallons _____
- f. 190,000 meters _____
- g. 23 s _____
- h. 100.1 m _____
- i. 10 L _____
- j. 25.0 g _____
- k. 100.05 Km _____
- l. 1,000,000,000,000,001 m _____

2. Two people measure the mass of a rock. One person gets a mass of 29.8 g while the other person, using the exact same balance measures 29.9 g. Which measurement is correct? Why?

3. Which of the following measurements is incorrect compared to the rest of them?

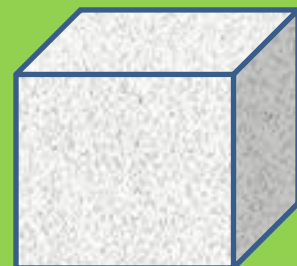
35.0 mL 34.9 mL 35.2 mL 35.00 mL 34.8 mL

4. Perform the indicated operation and give the answer to the correct number of significant figures.

- a. 2.863×40.235
- b. $3421.26 / 467.236$
- c. 7.036×4.36

5. A cube is 3.25 cm on each edge.

- a. What is the area of one side of the cube?
- b. What is the volume of the cube?



6. Three people measure the dimensions of a rectangular room. The length is measured with a meter stick and is 6.259 m long. The width is measured with a laser and he measured it to be 4.3549021763 m wide. The third person measured the height with a stick that was a meter long. She measured it to be 2.5 m high.

- a. Which measure is the most precise? How do you know?
- b. What is the calculated volume of the room?