

Show all work on loose leaf paper, use formulas, write big, paper is cheap, knowledge is valuable. Use correct significant figures everywhere you can.

- A** 1. Your teacher says U2 is the best band in the world.
(it's not C and most likely not D either!)
- A. this is a qualitative measurement B. this is a quantitative measurement
C. he knows nothing about music D. he's always right

- B&C** 2. You mass a piece of magnesium to be 75.4 grams.
Each of your three other lab partners measure it to be 72.5 grams.
The actual mass is 75.4 grams. Which TWO of these are correct?
- A. Your measure was precise B. your measure was accurate
C. their measures were precise D. their measures were accurate

3. What was the error that your friends made measuring the magnesium? **2.9 g**

4. What was their percent error? **-3.85%**

5. Explain why their percent error was positive or negative?

It's negative because they measured under the actual value

6. What is the mass of a piece of niobium if the volume is 50.0 cm³ ?

Use the formula, solve for mass, 3 SF, 429 grams

7. What is the volume of a hunk of zinc if it's mass is 25.5 grams? **Use the formula, solve for volume, 3 SF, 3.59 cm³ or 3.59 mL**

8. Convert 42.0 minutes (the length of our class) into years, express answer in scientific notation.

$$\frac{42.0 \text{ minutes}}{1} \times \frac{1 \text{ hour}}{60 \text{ minutes}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ year}}{365 \text{ days}} = 7.99 \times 10^{-5} \text{ years}$$