

Chapter 2 Math Review
Chemistry
2 points

Name: _____

Date: _____ Hour: _____

1. Tell how many significant figures each measurement has AND underline the uncertain digit!

- | | | | |
|----------------------------|-------|-----------------------------|-------|
| a) 35 Gg | _____ | j) 20.04080 mol | _____ |
| b) 3.57 m | _____ | k) 730 000 ns | _____ |
| c) 3.507 km | _____ | l) 6.751 pg | _____ |
| d) 0.035 kg | _____ | m) 0.157 kg | _____ |
| e) 0.246 cd | _____ | n) 28.0 μ L | _____ |
| f) 0.004 A | _____ | o) 0.070 mmol | _____ |
| g) 24.606 Pa | _____ | p) 2500 min | _____ |
| h) 2680 K | _____ | q) 2.690 $^{\circ}$ C | _____ |
| i) 5.60×10^{10} K | _____ | r) 3.00×10^{-23} L | _____ |

2. Convert 3.50 m to cm using the factor-label method:

$$\text{_____} \left(\frac{\text{_____}}{\text{_____}} \right)$$

3. Put the following measurements into scientific notation:

- (a) 701 000 000 kg _____
- (b) 0.0000054 N _____
- (c) 645 200 μ m _____
- (d) 0.00001 ns _____

4. Convert 6.5×10^{-4} g to kg using the factor-label method:

$$\text{_____} \left(\frac{\text{_____}}{\text{_____}} \right)$$

5. Convert 3.02 days to seconds using the factor-label method:

$$\text{_____} \left(\frac{\text{_____}}{\text{_____}} \right)$$

6. A student measured the amount of solid produced by the reaction as 45.0 g. The literature said he should have made 42.0 g. What was his percent error?

7. Convert 8.14 dm^3 to cm^3 using the factor-label method:

$$\text{_____} \left(\text{_____} \right)$$

8. A solution has a volume of 8.33 cm^3 and a mass of 10.0 g. What is its density?

$$D = \text{_____}$$

$$m = \text{_____}$$

$$v = \text{_____}$$

9. Round each of the following measurements to three significant figures:

(a) $777\,777 \text{ mL}$ _____

(b) 0.000556677 nN _____

10. Convert 24 mL/min to L/s using the factor-label method:

$$\text{_____} \left(\text{_____} \right)$$

11. When water boiled, the thermometer said the water's temperature was $89 \text{ }^\circ\text{C}$. What was the percent error of the thermometer?

12. A second measurement was taken with the same thermometer on another day. The boiling water's temperature was $94 \text{ }^\circ\text{C}$. A third measurement was $86 \text{ }^\circ\text{C}$. Is the thermometer accurate, precise, both, or neither? Explain your answer.

13. If an IV drips 0.0056 g of a drug to a patient every hour, how many milligrams of that drug is that patient receiving every day?

$$\text{_____} \left(\text{_____} \right)$$