

1. A doctor has ordered 1.5 g of tetracycline to be given every 4 hours to a patient. If your stock on hand is 500 mg tablets, how many will you need for 1.00 day's treatment?
2. How many days will an insulin bottle last for a patient if the patient take 50.0 "units" per day, 100.0 "units" = 1.000 mL, and one bottle holds 10.0 mL?

3. Which of the following statements is true?
 - a. For two atoms to be of the same element, they must both have the same number of protons in their nuclei.
 - b. For two atoms to be of the same element, they must both have the same number of neutrons in their nuclei.
 - c. For two atoms to be of the same element, they must both have the same number of electrons.

4. For $^{65}\text{Zn}^{2+}$, fill in the correct number of protons, neutrons, and electrons:

Protons:

Neutrons:

Electrons:

5. Draw the symbol (using the $^{65}\text{Zn}^{2+}$ type format) for a situation with 34 protons, 46 neutrons, and 36 electrons.

6. What is the same and what is different for two neutral isotopes? (Write "same" or "different" after each thing)

Protons:

Neutrons:

Electrons:

7. What is the same and what is different between a neutral atom and its ion? (Write "same" or "different" after each thing)

Protons:

Neutrons:

Electrons:

8. Which of the following statements is true?

In terms of size, $\text{Zn} > \text{Zn}^{2+} > \text{Zn}^{3+}$

In terms of size, $\text{S} > \text{S}^{2-}$

In terms of size, $\text{Fe} > \text{Fe}^{3+} > \text{Fe}^{2+}$

9. List the four fundamental forces:

10. Convert 72.6°F into degrees Celsius and degrees Kelvin

Celsius:

Kelvin:

11. For the formulas Fe, Ne, N_2 , $\text{C}_6\text{H}_{12}\text{O}_6$, and NaBr, which of the following statements is true:

- a. Fe, Ne, N_2 are elements; $\text{C}_6\text{H}_{12}\text{O}_6$, and NaBr are compounds; N_2 , $\text{C}_6\text{H}_{12}\text{O}_6$ are molecular; only NaBr is ionic
- b. Fe, Ne are elements; N_2 , $\text{C}_6\text{H}_{12}\text{O}_6$, and NaBr are compounds; N_2 , $\text{C}_6\text{H}_{12}\text{O}_6$ are molecular; only NaBr is ionic
- c. Only Fe is an elements; $\text{C}_6\text{H}_{12}\text{O}_6$, and NaBr are compounds; Ne, N_2 , $\text{C}_6\text{H}_{12}\text{O}_6$ are molecular; $\text{C}_6\text{H}_{12}\text{O}_6$ and NaBr is ionic

12. Which of the following statements is true:

- a. Covalent bonds involve shared electrons; molecules usually have a metal in the formula
- b. Ionic bonds involve charged ions; molecules usually have a metal in the formula
- c. Ionic bonds involve charged ions; ionic compounds usually have a metal in the formula

13. Which of the following statements is true:

- a. Chicken-noodle soup is a homogeneous mixture; Pepsi (no ice) is a heterogeneous mixture; distilled water is a pure substance
- b. Chicken-noodle soup is a heterogeneous mixture; Pepsi (no ice) is a heterogeneous mixture; distilled water is a homogeneous mixture
- c. Chicken-noodle soup is a heterogeneous mixture; Pepsi (no ice) is a homogeneous mixture; distilled water is a pure substance

Did you remember to write your name on the front?