

Chemistry 120 Week 2 Quiz 1 questions

- 1) You have a sample with a mass of 25 g and a volume of 2.8 ml. What is the density of this sample?

$$D = M/V \quad m = 25\text{g} \quad v = 2.8 \text{ mL} \times 0.001 \text{ dm}^3 / 1 \text{ mL} \quad V = 2.801 \text{ dm}^3$$

$$v = 2.8 \text{ mL}$$

$$D = 25\text{g} / 2.801 \text{ dm}^3$$

$$\text{Answer: } 8.9 \text{ g/mL}$$

- 2) How many valence electrons are there in an atom of Neon?

you look at the column at the periodic table. Ne is on column 8

Answer: 8

- 3) How many pounds (lbs) are in 58 kg?

Convert: $2.2 \text{ lbs} = 1 \text{ kg}$ you'll multiply $2.2 \times 58 = 127.6$

Answer: 127.6 lbs

- 3) Which atom would have an electron configuration of $1s^2 2s^2 2p^6 3s^2$

$3p^6$? Look at the periodic table and count

Answer: Ar

- 4) Determine how many electrons (e^-) you would expect of the following ions and ground state atoms to contain and match them up.

+ charge = Cations (lost e^-)

- charge = Anions (gain e^-)

b) Fluoride - 10

c) Fluorine - 9

d) Zn (I) - 29

e) Calcium ion - 18

- 5) A ground state atom (uncharged atom) gains 3 electrons. This atom will now have a charge of:

Answer: -3

- 6) What is the correct Lewis Dot Structure for Phosphorous?