

37. List the boiling and freezing point temperatures for each temperature scale.

	Celsius	Fahrenheit	Kelvin
Freezing point temperature	0°C	32°F	273
Boiling point temperature	100°C	212°F	373

38. What is the family name for the elements in group 2?

Alkaline Earth

39. What is the family name for the elements in group 1?

Alkali

40. Halogens have how many valence electrons?

7

41. Explain how Hund's Rule is used when filling an orbital diagram.

Electrons spread out before making pairs

42.-45. Give two examples of the following:

	Chemical Property	Chemical Change	Physical Property	Physical Change
Example 1	flammability	Iron rusting	density solubility	melting ice
Example 2	reactivity	Burning wood	color solubility	chipping wood

Use dimensional analysis to solve the following:

45. 0.84 years = _____ minutes

$$0.84 \text{ years} \left(\frac{365 \text{ days}}{1 \text{ year}} \right) \left(\frac{24 \text{ hrs}}{1 \text{ day}} \right) \left(\frac{60 \text{ min}}{1 \text{ hr}} \right) = 4.4 \times 10^5 \text{ min}$$

47. 7.23×10^{13} sec = _____ years

$$7.23 \times 10^{13} \text{ sec} \left(\frac{1 \text{ min}}{60 \text{ sec}} \right) \left(\frac{1 \text{ hr}}{60 \text{ min}} \right) \left(\frac{1 \text{ day}}{24 \text{ hr}} \right) \left(\frac{1 \text{ year}}{365 \text{ days}} \right) = 2.29 \times 10^4 \text{ years}$$

Determine the number of protons, neutrons and electrons.

48.-50.

	Protons	Neutrons	Electrons
Pd	46	60	46
P ⁻³	15	16	18
Ca ⁺²	20	20	18

51-54.

How many atoms are in the following chemical formulas?

CaCO₃ 5 (NH₄)₃ PO₄ 20

2 SO₄ 7 Mg(OH)₂ 5