Name	e: _	Block: Date:
		riew Sheet
		your answers in the blanks provided and attach work on a separate sheet (with problems numbered). The first transition metal with the lowest atomic number is in period 3.
2		Elements in the same period have Sand Hof energy in Elements in the same group have Sand Hof val. e
3		One mole of P ₅ would have a mass of 154.85 grams.
4		As the temperature increases the solubility of a gas in a liquid
5		Name the following:
		NaBr Sodium bromide NH4Cl ammonium chloride
		Ca(NO3)2 Calcium nitrate K2SO4 petassium sulfate
		HCIO3 (aq) Chloric acid FeCl3 from (III) Chloride
6	i,	2 mole of AlCl ₃ = $\frac{133 \cdot 33}{33}$ grams
7		Alkali metals will react with another (metal, halogen, noble gas)? Circle one
8		What causes compounds to have a high heat of vaporization? (size of molecules, mass of molecules or the
	(strength of intermolecular forces between the molecules)
9),	Nitrogen collected over water at 20°C has a pressure of 765 mmHg, if the total pressure is 771 mmHg, what is
		the partial pressure of the water vapor? to mmttg
1.	.0.	What is the full electron configuration for phosphorous? 15-25-20-35-30-3
_		What is the Lewis Dot Diagram for sulfur?
1	2.	How many calories of heat energy are required to heat 95.0 g of water from 0.0°C to 40.0°C?
		How many significant figures are in the number 0.002560?
1	.4.	How do you recognize a double replacement reaction? 2 Compounds exchange metals
1	5.	How do you find a precipitate? It is the product that is NOT Soluble in Hall
1	.6.	What is the total pressure of a gas made up of 3.0 kPa N₂ and 4.0 kPa O₂?
1	.7.	If the Lewis Dot Diagram of a molecule is :N≡N: what is the shape?
1	l8.	For question #18 what is the type of bond present? Tuple bond, non-polar covalent
		When a gas condenses is heat being released or absorbed?
		$[OH^{-}] = 1.0 \times 10^{-8}$ What is the pH?
2	21.	What does "like dissolves like" mean? polar dissolves polar, nonpolar dissolves nonpolar
		Would a nonpolar molecule dissolve in water or an organic solvent?
2	23.	Name three naturally occurring polymers: Nucleu Acid, Protein, Curbohydrate, Lipids
2	24.	NH ₄ OH: how many elements? 3 how many atoms? 7 how many ions? 2
2	25.	Bohr's atomic theory added: Lively levels Rutherford's atomic theory added: nucleus
2	26.	Using R=8.31 L kPa/mol K solve for moles given: 150.0 kPa, 50.0°C, and 50.0 L 2.79 mol
2	27.	What is the percentage of iron in Fe ₂ O ₃ ? <u>LP</u> 947 Fe
5	28	Nuclides: Boron-10.19.78% abundance and Boron-11.80.22% abundance. Determine the average atomic mass

10.80 are wronic mass

29. What are the two products of a neutralization reaction? Work and Sold and Sold aballoon is placed in ice water what will happen to its volume? develose 31. If Ca bonds with Cl what type of bond forms? Call and type of bond exists in a diatomic molecule? noopolar Corolland 32. What type of bond exists in a diatomic molecule? noopolar Corolland 33. Explain equilibrium: And of Solute Coming and of Solo = and going into Solo. 34. Isotopes vary in the number of: neutrons lons vary in the number of: electrons 35. If you need 150.0 ml of a 4.00 M HCl, how much 12.0 M HCl would be needed? 50.0 ml 36. Colligative properties depend on? number of particle created (i) when substance 37. Which would have the strongest intermolecular attractions? KCl, CaCl ₂ , NH ₂ or HI (circle one) 38. If 15.5 g of a hydrate is heated and then has a mass of 10.0 g what was its percent water? 25.5 lowater 40. What element has the largest radius? If the smallest radius? He 41. What element has the highest ionization energy? He howest ionization energy? If the lowest electronegativity? If the lowest lonization energy? If
30. If a balloon is placed in ice water what will happen to its volume? 31. If Ca bonds with Cl what type of bond forms? 32. What type of bond exists in a diatomic molecule? 33. Explain equilibrium: 34. Isotopes vary in the number of: 35. If you need 150.0 ml of a 4.00 M HCl, how much 12.0 M HCl would be needed? 36. Colligative properties depend on? 37. Which would have the strongest intermolecular attractions? KCl, CaCl ₂ , NH ₃ or HI (circle one) 38. If 15.5 g of a hydrate is heated and then has a mass of 10.0 g what was its percent water? 39. What element has the largest radius? If the smallest radius? He 40. What element has the highest ionization energy? He the lowest ionization energy? FY 41. What element has the highest electronegativity? If the lowest electronegativity? FY 42. What happens to atomic radius as you go down a group on the periodic table? 43. Most reactive metal? FY Most reactive non-metal? F What group of elements are unreactive? Mobile gasses 44. The majority of the elements on the periodic table are: solid liquid gasses metal semimetal non-metal (circle 2)
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45. What is a catalyst? Substance That Tenures the Tenures the How does its use affect the
need for activation energy? Increase, decrease or does not change the amount needed. (Circle your answer)
46. If your reaction had a yield of 45.0g and the theoretical yield was 60.0 g, determine the percent yield and the
percent error. 75,0 % yield 26.0 % error
47. Manganese can have multiple charges, what is the charge of Mn in the compound MnCl ₄ ? $4+$
48. What is the molar mass of NO ₂ ? 46.01 Determine the density of NO ₂ (g) at STP. 2.059
49. Ca ²⁺ How many protons? $\frac{20}{20}$ Electrons? $\frac{18}{20}$ Neutrons? $\frac{20}{20}$ Atomic number? $\frac{20}{20}$
50. For question number 51 what caused the calcium atom to become a 2+ ion?
51. If 450.0 ml of a gas at 23°C is heated to 32°C, what is the new volume? 457.5 -> 460 mc
52. If 250.0 ml of a gas at 100.9 kPa is pressurized to 102.6 kPa, what would the new volume be? 245.9 ml
53. How many moles are in 400.0 g of CaCO ₃ ? 3-999 mpl
54. 2 H ₂ (g) + O ₂ (g) \rightarrow 2 H ₂ O (g) If 37.4 g of oxygen gas react, how many liters of water vapor are produced? $\frac{52.4}{4}$
55. $425 \text{ kg} = \frac{0.425}{0.425} \text{ g}$ 2.35 cm = $\frac{0.0235}{0.0235} \text{ m}$ 0.299 L = $\frac{2.99 \times 10^{-4}}{0.0235} \text{ m}$
56. If 2 elements combined with element X in the same ratio, they must both have the same #ofvolence
57. How many atoms of sulfur are in 46.5 g of sulfur? $\frac{8.73 \times 10^{23} \text{cm/s}}{1.000 \times 10^{100} \text{cm/s}}$
58. How many moles of CuSO₄ are in 0.350 L of a 1.60 M solution? <u>0.560 0 me</u> l
59. Balance the following equation:
60. If the frequency of light increases, the wavelength of the light decrease and the energy workses.
61. Ethane, an organic compound, has the formula $\frac{C_2H_{ce}}{C_2C_2}$ and is saturated or unsaturated?