Fix

Molar Conversions Rally Coach

1. Determine the number of moles of strontium in 3.4×10^{24} atoms of strontium. $3.4\times10^{24}\text{ atoms Sr} \times \frac{1\text{ mol Sr}}{6.022\times10^{23}\text{ atoms}} =$ 5.6 mol Sr	2. Determine the number of formula units of sodium chloride in 4.5 moles sodium chloride. $4.5\text{ mol NaCl} \times \frac{6.022\times10^{23}\text{ f. units}}{1\text{ mol}} =$ 2.7×10^{24} f. units NaCl
3. Determine the mass, in grams, of 7.91 moles sodium hydroxide. $7.91\text{ mol NaOH} \times \frac{40.00\text{g NaOH}}{1\text{ mol NaOH}} =$ 316 g NaOH	4. Determine the number of moles in 41.7 g of dinitrogen pentoxide. $41.7\text{g } N_2O_5 \times \frac{1\text{ mol } N_2O_5}{108.02\text{g}} =$ .386 mol N_2O_5
5. What is the mass, in grams, of 5.98×10^{34} molecules of carbon dioxide. $5.98\times10^{34}\text{ molecules} \times \frac{1\text{ mol}}{6.022\times10^{23}\text{ molecules}} \times \frac{44.01\text{g}}{1\text{ mol}} =$ 4.37×10^{12} g	6. What is the volume, in liters, of 65g hydrogen gas (remember BrINClHOF!) $65\text{g } H_2 \times \frac{1\text{ mol } H_2}{2.02\text{g } H_2} \times \frac{22.4\text{L } H_2}{1\text{ mol } H_2} = 720\text{ L}$

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7. Determine the number of moles of strontium in 1.5×10^{22} atoms of Sr. $1.5\times10^{22}\text{ atoms Sr} \times \frac{1\text{ mol Sr}}{6.022\times10^{23}\text{ atoms}} =$ .025 mols	8. Determine the number of formula units of sodium chloride in 3.75 moles NaCl. $3.75\text{ mol NaCl} \times \frac{6.022\times10^{23}\text{ f. units}}{1\text{ mol}}$ 2.26×10^{24} f. units
9. Determine the mass, in grams, of 17.9 moles NaOH. $17.9\text{ mol NaOH} \times \frac{40.00\text{g NaOH}}{1\text{ mol NaOH}} =$ 716 g NaOH	10. Determine the number of moles in 87.7 g of N_2O_5. $87.7\text{g } N_2O_5 \times \frac{1\text{ mol } N_2O_5}{108.02\text{g } N_2O_5} =$ .812 mol N_2O_5
11. What is the mass, in grams, of 2.56×10^{34} molecules of CO_2. $2.56\times10^{34}\text{ molecules} \times \frac{1\text{ mol } CO_2}{6.022\times10^{23}} \times \frac{44.01\text{g}}{1\text{ mol}}$ $= 1.87\times10^{12}$ g	12. What is the volume, in liters, of 92 g H_2 $92\text{g } H_2 \times \frac{1\text{ mol } H_2}{2.02\text{g } H_2} \times \frac{22.4\text{L } H_2}{1\text{ mol } H_2} =$ 1.0×10^{3} L