

Name _____

More Mole Conversions

- 1) Mercury has a density of 13.6g/mL. How many atoms of Hg are in a 25.0mL sample?
1.02x10²⁴ atoms Hg
- 2) How many liters are occupied by 0.0860 moles of neon gas at STP?
1.93L Ne
- 3) What is the volume at STP of a sample that contains 246.2g of oxygen gas?
172.3L O₂
- 4) How many grams of copper are present in a sample containing 1.28x10²⁵ atoms?
1350g Cu
- 5) How many total atoms are present in a 3.00g sample of NaOH?
1.35x10²³ atoms total
- 6) What is the density of CO₂ at STP in g/L? (Assume 1 mole)
1.96g/L
- 7) How many atoms are contained in a 400g sample of sulfur dioxide?
1.13x10²⁵ atoms
- 8) What would the height of an iron cylinder be if you have 9.59x10²⁵ atoms and the cylinder's radius is 6.0cm? $D_{Fe} = 7.87\text{g/mL}$ $V = \pi r^2 h$
10.cm
- 9) There are 2.54x10²¹ atoms in a crystal of ammonium sulfate. What is the mass of that crystal?
3.72x10⁻²g (NH₄)₂SO₄
- 10) There are 1.28x10²⁰ atoms of oxygen in a sample of CO₂. How many grams of CO₂ do you have?
4.68x10⁻³g CO₂
- 11) How many oxygen atoms are in a 10.0g sample of aluminum phosphate?
1.98x10²³ atoms O
- 12) How many phosphorus atoms are in a 10.0g sample of aluminum phosphate?
4.94x10²² atoms P
- 13) How many fluorine atoms are present in a 4.0L sample of carbon tetrafluoride gas at STP?
4.3x10²³ atoms F