

MOLE CONVERSION PRACTICE #3

Directions: Show all work. Check sig.figs, units, and chemical formulas.
When applicable, specify the type of representative particle in the problem.

REVIEW

- 1) How many particles are in 1 mole?
- 2) Explain why "How many grams are in 1 mole?" is a trick question.
- 3) What is STP?
- 4) How many liters do 1 mole of any gas occupy at STP?

MATH PROBLEMS

- 5) How many grams are in 128.66 L of radon gas at STP?
- 6) How many moles of aluminum oxide are contained in 3.20 g?
- 7) Convert 7.1×10^{21} particles of calcium nitrate to grams of calcium nitrate.
- 8) How many liters of space would 44.00 g of nitrogen gas occupy at STP?
- 9) What is the molar mass of potassium iodide?
- 10) 1200 L of chlorine gas at STP would contain how many r.p.?
- 11) How many moles of neon gas are in 55.4 L at STP?
- 12) What is the mass of 0.4571 mol of sodium sulfate, in grams?
- 13) What is the GMM of dinitrogen pentoxide?
- 14) Convert 1.2 mol copper(I) sulfide to r.p. of copper(I) sulfide.
- 15) How many grams of cobalt(II) chloride are equal to one mole of cobalt(II) chloride?
- 16) How many representative particles are in a 6.17 g sample of lithium sulfide?
- 17) 3.33×10^{17} r.p. of carbon dioxide gas would occupy how many liters of space under STP conditions?
- 18) Convert 0.090 mol of carbon monoxide gas to liters of carbon monoxide gas at STP.
- 19) How many moles of zinc acetate are in 1.9×10^{34} r.p. of zinc acetate?
- 20) Find the GFM of ammonium phosphide.