

DIMENSIONAL ANALYSIS (“D.A.”) MOLE PROBLEMS – non-stoich

- 1) Read the entire problem.
- 2) Read the problem again to find the “given” (“teacher number”).
- 3) Write the given number with unit and chemical formula label on the left side of the paper.
- 4) Draw a multiplication sign (“x”) next to the given number.
- 5) Draw a line on top of the loose leaf paper line next to the given number.
- 6) Leaving room for a number, move the starting unit and label from the given number down diagonally.
- 7) A conversion factor is a fraction of two equivalent terms. Half of the mole conversion factor must be “1 mole.” If you are solving for moles, it will be on top. If you are getting out of moles, it will be on the bottom.
- 8) For grams, use the periodic table molar mass of the element or compound. For liters of a gas at STP, use 22.4 L. For representative particles (atom, ion, molecule, formula unit), use 6.02×10^{23} .
- 9) Cancel the units of the top left and bottom right.
- 10) Put the numbers into the calculator.
- 11) Adjust sig.figs. and label answer with units and labels.