

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## The Mole: Multi Step Conversions: Quiz 3c

**Make sure to SHOW ALL WORK and INCLUDE UNITS!**

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1. A container holds only dinitrogen tetroxide. If there are  $1.54 \times 10^{24}$  atoms of oxygen in total, what is the total mass of dinitrogen tetroxide in the container?

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Answers:

*Formula =  $N_2O_4$  MM = 92.02 g / mol*

$$1.54 \times 10^{24} \text{ atoms O} \times \frac{1 \text{ molec}}{4 \text{ atoms O}} \times \frac{1 \text{ mol}}{6.02 \times 10^{23} \text{ molec}} \times \frac{92.02 \text{ g}}{1 \text{ mol}} = 58.9 \text{ g } N_2O_4$$
