

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

## The Mole: One Step Conversions: Quiz 2c

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

/6

1. How many moles are  $1.20 \times 10^{25}$  atoms of phosphorous?
2. Find the mass in 2.6 mol of lithium oxide.
3. What is the volume of 1.2 moles of water vapor at STP?

Answers:

1. See Below:

$$\text{a. } 1.20 \times 10^{25} \text{ atoms P} \times \left( \frac{1 \text{ mol}}{6.02 \times 10^{23} \text{ atoms}} \right) = 19.9 \text{ moles P}$$

$$\text{b. } 2.6 \text{ mol Li}_2\text{O} \times \frac{29.88 \text{ g}}{1 \text{ mol}} = 78 \text{ g Li}_2\text{O}$$

$$\text{c. } 1.2 \text{ mol H}_2\text{O} \times \left( \frac{22.4 \text{ L}}{1 \text{ mol}} \right) = 27 \text{ L H}_2\text{O}$$