

Chem 047 Test #2

Name _____

Make sure to answer with the correct number of significant figures and units!

Avagadro's number = 6.02×10^{23}

Gas at STP: 22.7 L/mol

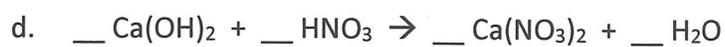
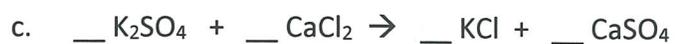
1. What volume at STP is occupied by 15.3 g of $B_2H_6(g)$?

2. How many atoms are in 17.8 L of $O_3(g)$ at STP?

3. What is the density of $NOCl(g)$ at STP?

8. What volume of 10.0 M LiOH is required to prepare 2.00 L of 0.650 M LiOH?
9. What is the molar concentration of the HNO₃ solution resulting from mixing 50.0 mL of 0.125 M HNO₃ and 75.0 mL of 0.350 M HNO₃?
10. Write the balanced chemical equation including phases: Powdered sodium carbonate and aqueous hydrobromic acid react to form carbon dioxide gas, aqueous sodium bromide and water.

11. Balance and classify each reaction as one of: synthesis, decomposition, single replacement, double replacement, neutralization (acid/base) or combustion.



12. Complete and balance the following combustion reaction:

