

Part V: DILUTION

1. What volume of 2.0 M HCl is required to make 750.0 mL of 0.240 M HCl?
2. What is the final concentration of KBr when 25.0 mL of 5.0 M KBr is mixed with 135.0 mL of 0.250 M KBr?
3. When 75.0 mL of 0.500M BaCl₂ is mixed with 85.0 mL of 1.25 M CaCl₂:
 - a. What is the final concentration of BaCl₂?
 - b. What is the final concentration of CaCl₂?

3. How many chlorine atoms are present in 125.0 mL of 0.0321 M NaCl?
4. How many oxygen atoms are present in 110.0 mL of 0.200 M MgCr₂O₇?
5. How many HBr molecules are present in 25.0 mL of 0.185 M HBr?

HERE IS A CHALLENGE!!!

6. How many NaCl molecules are present in the final solution when 15.0 mL of 2.50 M NaCl is mixed with 75.0 mL of 0.500 M NaCl?

QUESTIONS THAT TIE IT ALL TOGETHER :

1. How many moles of Cu are contained in a 289 mL sample if the density is 13.6 g/mL?
2. What is the volume occupied by 3.2 mols of methane (CH₄) if the density of methane is 0.987 g/mL?