

The following questions are worth 2 points each:

1. Describe how to dilute a solution.
  2. During a dilution process, the AMOUNT of solute... (finish this statement)
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For the following problems, point values are shown for each.

3. If I dissolve 12.4 moles of potassium chloride in water to make 0.3 liters of solution, what is the molarity of my solution? (3 points)
4. If I dissolve 3.1 moles of lithium iodide in water to make 1.4 liters of solution, what is the molarity of my solution? (3 points)
5. How many grams of NaOH (Molar Mass = 40.0 grams /mole) would be required to produce a 2.7 M (molar) solution with a volume of 14 mL? (3 points)
6. How many grams of NaCl (Molar Mass = 58.44 grams /mole) would be required to produce a 0.3 M (molar) solution with a volume of 4.2 L? (3 points)
7. If I have 550 mL of a 2.5 M solution of NaOH (Molar Mass = 40.0 grams /mole), how many grams of NaOH do I have? (3 points)

8. If I have 1.56 L of a 0.5 M solution of NaCl (Molar Mass = 58.44 grams /mole), how many grams of NaCl do I have? (3 points)
  
  
  
  
  
  
  
  
  
  
9. If I have 2.80 L of a 12 M solution of HCl, what will my molarity be if I dilute this with enough water to create 1.5 liters of solution? (3 points)
  
  
  
  
  
  
  
  
  
  
10. If I have 340 mL of a 5.5 M solution of HCl, what will my molarity be if I dilute this with enough water to create 2.5 liters of solution? (3 points)
  
  
  
  
  
  
  
  
  
  
11. What is the molarity of my final solution if I add 650 mL to 1.34 liters of a 3.5 M solution of NaCl? (4 points)
  
  
  
  
  
  
  
  
  
  
12. What is the molarity of my final solution if I allow 250 mL of solvent to evaporate from 4.25 liters of a 0.75 M solution of NaCl? (4 points)