

Practice Solution Problems

1. Calculate the molarity of a solution prepared by dissolving 84.0 grams of acetic acid ($\text{HC}_2\text{H}_3\text{O}_2$) in 250 mL of solution.

Ans: 5.6 M

2. What is the molarity of a solution prepared by dissolving 2.00 grams of potassium chlorate in 150 mL of solution?

Ans: 0.109 M

3. How many grams of potassium hydroxide must be used to prepare 600 mL of a 0.450 M solution?

Ans: 15.1 grams

4. What volume of 0.250 M solution can be prepared by dissolving 16.0 grams of K_2CO_3 ?

Ans: 463 mL

5. What volume of 0.35 M AgNO_3 can you prepare with 5.0 grams of AgNO_3 ?

Ans: 0.084 L

6. How many grams of NaCl must be used to prepare 150 L of a 1.00 M NaCl solution?

Ans: 8.8×10^3 grams

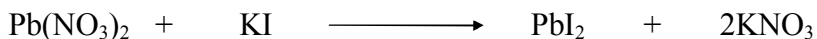
7. What is the molarity of a solution prepared by mixing 250 mL of a 0.750 M H_2SO_4 solution with 400 mL of a 2.50 M H_2SO_4 solution?

Ans: 1.83 M H_2SO_4

8. What volume of 16.0 M HNO_3 must be used to prepare 100 mL of 2.5 M HNO_3 solution?

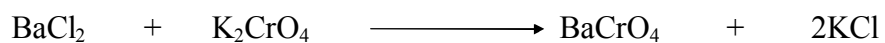
Ans: 16 mL

9. How many grams of lead (II) iodide can be precipitated by adding excess solid $\text{Pb}(\text{NO}_3)_2$ to 750 mL of a 0.250 M solution of KI ?



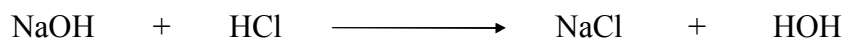
Ans: 43.2 grams

10. For the following reaction, calculate the volume of 1.0 M BaCl₂ that will be needed to react with 50 mL of 0.300 M K₂CrO₄ solution .



Ans: 15 mL

11. What volume of 0.2550 M NaOH is required to react with 20.22 mL of 0.1254 M HCl?



Ans: 9.943 mL