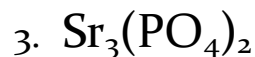
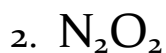


Mole Conversions

Show all work, including conversion factors and units.

Calculate the molecular mass for each of the following molecules:



Convert from grams to moles, or moles to grams

4. How many moles is 12.5 g of magnesium hydroxide, Mg(OH)₂?

5. How many grams are in 0.65 moles H₂SO₄?

Convert from moles to molecules, or molecules to moles

6. How many molecules are in 2.0 moles of hydrogen gas?

7. How many molecules are in 2.56 moles Ca?

8. How many molecules are 0.75 moles AlCl₃?

Convert from molecules to grams, or grams to molecules

9. The number of grams in 1.25×10^{25} molecules of aluminum oxide.

10. The number of molecules in 115 g nitrogen dioxide.

Application Problems

11. How many moles are in 96.0 g of carbon dioxide?

12. How many grams would 5.22×10^{25} molecules of copper (II) sulfate (CuSO₄) weigh?

13. How many moles is 1.46 g of oxygen*?

14. How many grams are in 2.0×10^{25} molecules of silver nitrate (AgNO₃)?

15. How many moles are in 15.0 g C₂H₆?

16. How many moles are in 2.41×10^{24} molecules CO₂?