

Name: _____

Block: _____

Mole Conversion Problems

Note: Some of these are the same compounds as in the “Molar Mass” worksheet, so you can use the formula weights from that worksheet as the starting point for your calculations.

1. How many moles are in 72.9 g of HCl?
2. How many moles are in 79.85 g Fe₂O₃
3. How many moles are in 11.2 ℓ of CO₂ gas at S.T.P.?
4. How many molecules are in 720 g of C₆H₁₂O₆?
5. How many grams are in 3.5 mol of Ca₃(PO₄)₂?
6. How many grams are in 0.275 mol of UOCl₂?
7. What is the volume of 1.35 mol of Cl₂ gas at S.T.P.?
8. How many grams are in 3.01×10^{24} molecules of (NH₄)₂SO₄?
9. How many molecules are in 85 g of AgNO₃?
10. How many grams are in 1.204×10^{24} molecules of CH₃COOH?

11. Convert 86.84 g of LiBr to moles:

12. Convert 302.7 g of ScCl_3 to moles:

13. Convert 8.8 g of K_2CO_3 to moles:

14. Convert 2.5 g of CuCl_2 to moles:

15. Convert 8.045 g of H_2CO_3 to moles:

16. How many grams of lithium are there in 3.45 moles?

17. How many moles of nitrogen are there in 4.3×10^{23} molecules?

18. How many cadmium atoms are there in 6.57×10^3 moles?

19. How many grams of SO_2 are 4.5×10^{24} molecules?

20. How many copper atoms are in 1 mole of CuO ?

21. How many copper atoms are in 5.6 mole of Cu_2O_3 ?

22. How many grams of sulfur are in 3.45×10^{22} molecules of SO_2 ?