The Mole and Avogadro's Number

One mole of a substance contains Avogadro's Number (6.02 x 10²³) of molecules.

How many molecules are in the quantities below?

- 1. 2.0 moles
- 2. 1.5 moles
- 3. 0.75 mole
- 4. 15 moles
- 5. 0.35 mole

How many moles are in the number of molecules below?

- 6. 6.02 x 10²³
- 7. 1.204 x 10²⁴
- 8. 1.5 x 10²⁰
- 9. 3.4 x 10²⁶
- 10. 7.5 x 10¹⁹

Gram Formula Mass

Determine the gram formula mass (the mass of one mole) of each compound below.

1. KMnO ₄	
2. KCI	2. 125 g of H SO,
3. Na ₂ SO ₄	3. 100. g of KMnO
4. Ca(NO ₃) ₂	
5. Al ₂ (SO ₄) ₃	4 74 grof KOL
6. (NH ₄) ₃ PO ₄	5
7. $CuSO_4 \bullet 5H_2O$	
8. Mg ₃ (PO ₄) ₂	Determinentrenumber of grams in 6. 2.6 moles of NoCl
9. Zn(C ₂ H ₃ O ₂) ₂ •2H ₂ O	
10. Zn ₃ (PO ₄) ₂ •4H ₂ O	7. 0.60 moles of H 50.
11. H ₂ CO ₃	8. 1.70 mojes of Who
12. $Hg_2Cr_2O_7$	
13. Ba(ClO ₃) ₂	9. 0.25 moles of KO
14. Fe ₂ (SO ₃) ₃	0. 3.2 moles of CuSO,•6H.O
15. $NH_4C_2H_3O_2$	
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Chemistry IF0235

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