

The Mole

Section 11.1 Measuring Matter

In your textbook, read about counting particles.

In Column B, rank the quantities from Column A from smallest to largest.

Column A	Column B
0.5 mol	1. _____
200	2. _____
5	3. _____
6 000 000 000	4. _____
6.02×10^{23}	5. _____
dozen	6. _____
four moles	7. _____
gross	8. _____
pair	9. _____
ream	10. _____

In your textbook, read about converting moles to particles and particles to moles.

In the boxes provided, write the conversion factor that correctly completes each problem.

11. $1.20 \text{ mol Cu} \times$ $= 7.22 \times 10^{23} \text{ Cu atoms}$

12. $9.25 \times 10^{22} \text{ molecules CH}_4 \times$ $= 1.54 \times 10^{-1} \text{ mol CH}_4$

13. $1.54 \times 10^{26} \text{ atoms Xe} \times$ $= 2.56 \times 10^2 \text{ mol Xe}$

14. $3.01 \text{ mol F}_2 \times$ $= 1.81 \times 10^{24} \text{ molecules F}_2$