

1. How many molecules are there in 3.6 moles of molecules?

1. $\frac{2.2 \times 10^{24}}{\text{molecules}}$

$$3.6 \text{ mol} \times \frac{6.02 \times 10^{23} \text{ molecules}}{1 \text{ mol}}$$

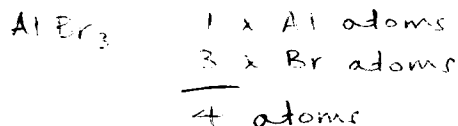
2. How many moles of molecules are there in
- 4.3×10^{23}
- molecules?

2. $\underline{0.71 \text{ mol}}$

$$4.3 \times 10^{23} \text{ molecules} \times \frac{1 \text{ mol}}{6.02 \times 10^{23} \text{ molecules}}$$

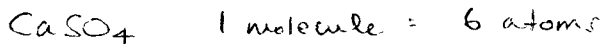
3. How many atoms are there in one molecule of Aluminum bromide?

3. $\underline{4 \text{ atoms}}$



4. How many atoms are there in 43 molecules of calcium sulfate?

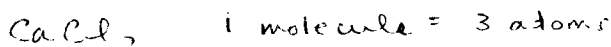
4. $\underline{258 \text{ atoms}}$



$$43 \text{ molecules} \times \frac{6 \text{ atoms}}{1 \text{ molecule}} = 258 \text{ atoms}$$

5. How many moles of atoms in 65 molecules of calcium chloride?

5. $\underline{3.2 \times 10^{-22} \text{ moles of atoms}}$

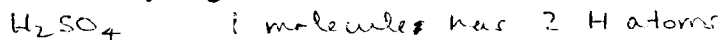


$$65 \text{ molecules} \times \frac{3 \text{ atoms}}{1 \text{ molecule}} \times \frac{1 \text{ mol}}{6.02 \times 10^{23} \text{ atoms}} = 3.2 \times 10^{-22} \text{ moles of atoms}$$

$$(195 \text{ atoms} \div 6.02 \times 10^{23} \text{ atoms})$$

6. How many molecules of hydrogen sulfate can be produced from 4.3 moles of hydrogen atoms?

6. $\underline{1.3 \times 10^{24} \text{ molecules}}$



$$4.3 \text{ mol (H atoms)} \times \frac{6.02 \times 10^{23} \text{ atoms}}{1 \text{ mol}} \times \frac{1 \text{ molecule}}{2 \text{ atoms}} = 1.3 \times 10^{24} \text{ molecules}$$

7. How many atoms of oxygen are there in 3.8 mol of water molecules?

7. $\underline{2.3 \times 10^{24} \text{ atoms}}$



$$3.8 \text{ mol} \times \frac{6.02 \times 10^{23} \text{ molecules}}{1 \text{ mol}} \times \frac{1 \text{ atom}}{1 \text{ molecule}} = 2.3 \times 10^{24} \text{ atoms}$$