How many molecules are in 3.98 moles of aluminum hydroxide, $Al(OH)_3$?

Answers: **Again, start with what was given 3.98 moles of Al(OH)₃.**

Also, it is important to KNOW how to convert from one to another. Do not convert one thing (in one direction) and then go the "opposite" direction just to go back the original direction again.

$$kg \rightarrow g \rightarrow mol \rightarrow molecules \rightarrow atoms$$

OR

$$atoms \rightarrow molecules \rightarrow mol \rightarrow grams \rightarrow kg$$

(Example of what NOT to do, you are given the number of moles and asked to calculate the number of atoms present... Do not convert the moles to grams if you are trying to find atoms – convert moles to molecules then to atoms.)

$$\frac{3.98 \ mol \ Al(OH)_3}{} \times \frac{6.02 \times 10^{23} \ molecules \ Al(OH)_3}{1 \ mol \ Al(OH)_3} \times \frac{7 \ atoms}{1 \ molecules \ Al(OH)_3} = 1.68 \times 10^{29} \ atoms$$