name: $\qquad$
Read Stoich BASICS. These are simple 1 step conversion math problems. They are sometimes called Moles To Moles problems. They require just a balanced equation and no conversions to solve.

Carbon disulfide is an industrial solvent. It is prepared by the reaction of solid carbon and sulfur dioxide gas forming into solid carbon disulfide \& carbon monoxide gas.

How many moles of carbon disulfide form when 6.35 moles of carbon react?

How many moles of carbon are needed to react are needed to react with 5.44 moles of $\mathrm{SO}_{2}$ ?

How many moles of carbon monoxide form at the same time 0.246 moles carbon disulfide form?

How many moles of sulfur dioxide are needed to make 118 moles of carbon disulfide?
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These are 2 STEP problems, not just moles to moles, but an additional step either before, or after the mole ratio math. You must show ALL math and ratio!

Ammonia is formed by combining $\mathrm{H}_{2}$ gas \& $\mathrm{N}_{2}$ gas, as shown in the balanced equation:

$$
\mathrm{N}_{2(\mathrm{G})}+3 \mathrm{H}_{2(\mathrm{G})} \rightarrow 2 \mathrm{NH}_{3(\mathrm{G})}
$$

How many grams of ammonia form when 71.60 moles of $\mathrm{N}_{2(\mathrm{G})}$ react?

How many liters of nitrogen are needed to react with 12.65 moles of $\mathrm{H}_{2}$ ?

How many moles of $\mathrm{NH}_{3}$ form at the same time $8.32 \times 10^{24}$ molecules of $\mathrm{H}_{2}$ gas reacts?
$\qquad$
Lithium metal reacts with phosphoric acid, releasing hydrogen gas and a new solution of lithium phosphate.


Balance this equation with phase symbols
$\qquad$ $+$ $\qquad$ $\rightarrow$ $\qquad$ $+$ $\qquad$

You start with 548.2 g of Lithium and sufficient acid to completely react all of the lithium.
How many formula units of lithium phosphate form?

If $4.91 \times 10^{24}$ atoms of lithium completely react, how many liters of $\mathrm{H}_{2}$ gas form?

