

# Limiting Reagent

The previous examples assume you have exactly the right amount of all of the reactants to make the products. How do we know how much to use or more importantly, what would happen if the reactants were not present in stoichiometric proportions?

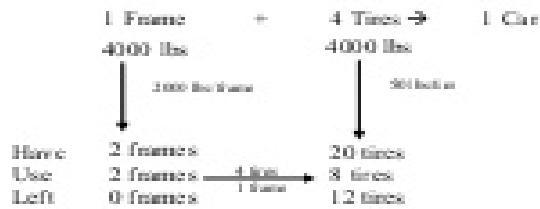


What if we have 4,000 lbs of frames and 4,000 lbs of tires? How many cars could we make?

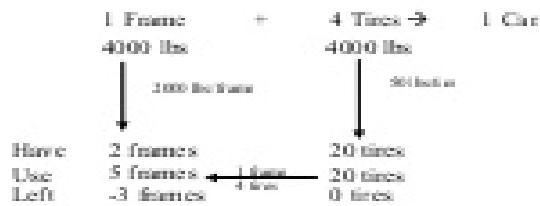


How many cars could we make?

With limiting reagent problems, you must look at what you have, what you need, and what would be left over.



In this example, we try to use up all of the frames and see that we're left with 12 tires. Thus, the frames are the limiting reagent.



In this example, we try to use up all of the tires and see that we would end up with a negative amount of frames so this is impossible. Thus, the frames are still the limiting reagent.