Chemistry Worksheet NAME: _____
Limiting Reactants – Basics Block: _____

Show all work; observe all significant figures, and record units with all answers.

1. 1 cheese slice + 2 bread slices $\rightarrow$ 1 cheese sandwich
   a. A cook has 12 slices of cheese and 20 slices of bread. How many cheese sandwiches can be made?

      Ans: _____

   b. A cook has 38 slices of cheese and 4 loaves of bread with 18 slices per loaf, how many cheeses sandwiches can be made?

      Ans: _____

   c. A super cook has 0.100 moles of cheese slices and 0.600 moles of bread slices. How many moles of cheese sandwiches can be made?

      Ans: _____

   d. How many cheese sandwiches can be made from the starting materials in (c)?

      Ans: _____

   e. Cheese slices have a mass of 12.5 grams each. If you have 5.00 kg of cheese slices, what is the maximum number of sandwiches that can be made?

      Ans: _____

   f. How many slices of bread are needed to make sandwiches from all the cheese in (e)?

      Ans: _____

   g. The average bread slice has a mass of 20.0 grams. How much is the total mass of the bread from part (f)?

      Ans: _____

   h. What is the mass of the sandwiches made from bread in part (g)?

      Ans: _____

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2. Automobiles have 4 wheels, and each wheel is held on with 5 lugs.
   a. How many wheels are needed to make 120 automobiles?

      Ans: _____

   b. How many lugs are needed to make 120 automobiles?

      Ans: _____

   c. A supply line for an automobile plant has 214 wheels and 5 gross of lugs remaining (a gross is 144). What is the maximum number of automobiles that can be made using these parts?

      Ans: _____

   d. It turns out that 86 wheels are the incorrect size, thus cannot be used. Now, what is the maximum number of automobiles that can be made using the remaining parts?

      Ans: _____

   e. A shipment of lugs arrive weighing 156 kg. The boss asks if enough lugs have arrived to put the wheels on another 125 automobiles. A clever worker weighs a lug and determines that the mass is 78 grams. How many lugs are in the shipment?

      Ans: _____

   f. What is the maximum number of cars that can be assembled with the new shipment of lugs from part (e)?

      Ans: _____

   g. A large taxi company orders 6250 cars for a new fleet of taxis. The plant manager needs to order lugs, but to be safe he wants to order 10% more than he needs. How many kilograms of lugs should he order?

      Ans: _____