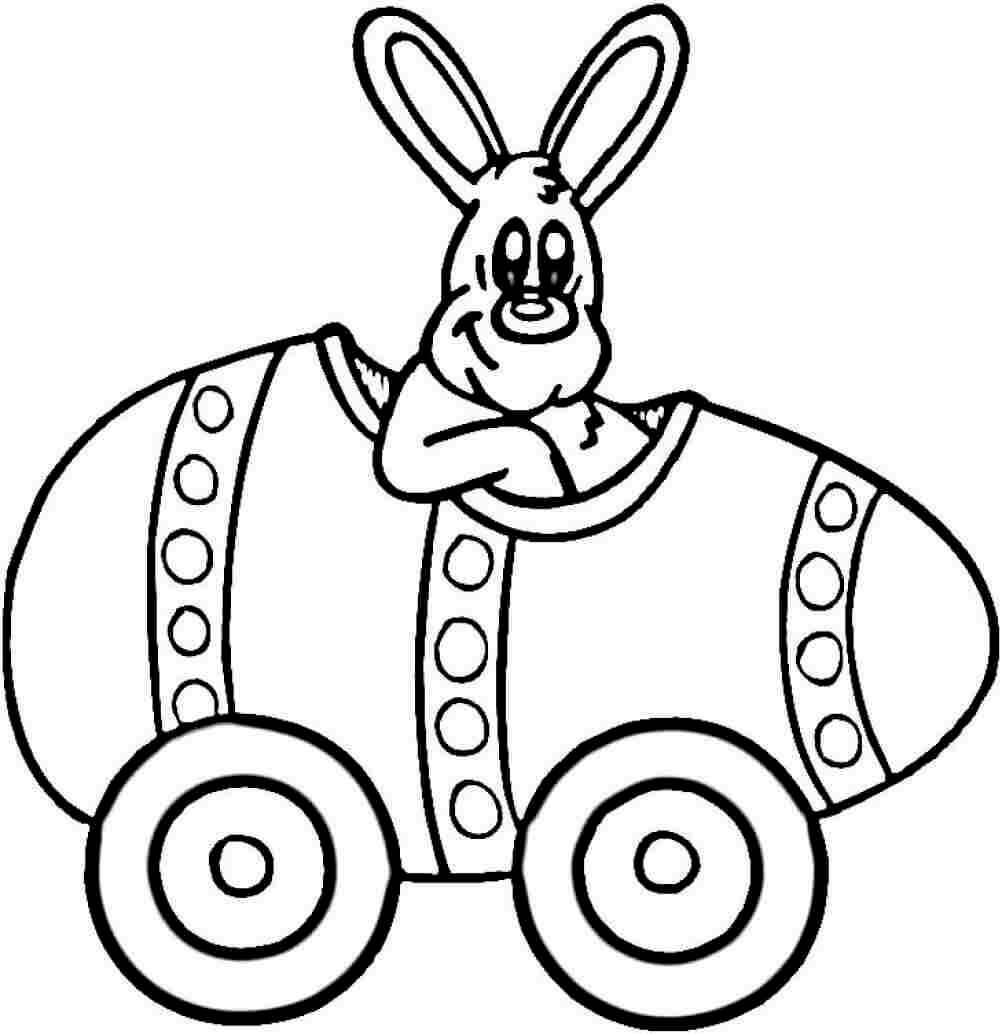
**Easter Stoichiometry!**

*The Easter Bunny, shown cheerful despite his 20th place finish in the 1974 24-hour LeMans auto race.*

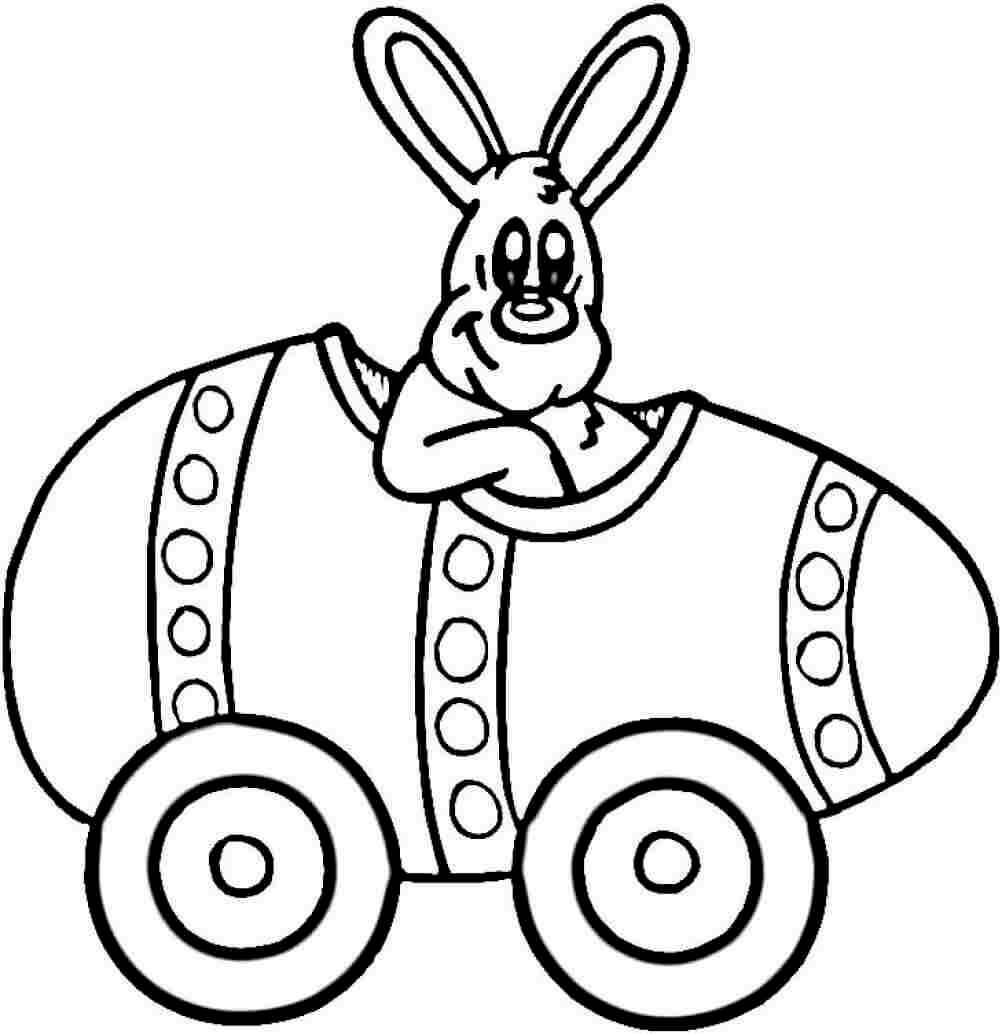
The bunny approves!

1) When Cu reacts with AgNO3, Ag metal and Cu(NO3)2 are formed. If 35 grams of copper and an excess of silver nitrate are used to perform this reaction, how much silver metal will be formed?

2) Hydrofluoric acid (HF) is very dangerous. To neutralize it in an acid-base reaction, it is typically combined with aluminum hydroxide – Al(OH)3 – to form aluminum fluoride (AlF3) and water. If I have 12.5 grams of hydrofluoric acid that I need to neutralize, how many grams of aluminum hydroxide will I need to neutralize it?

3) When I add fluorine gas (F2) to acetylene (C2H2), 1,1,2,2-tetrafluoroethane (C2H2F4) is formed in a synthesis reaction. If I start this reaction with 25 grams of fluorine gas and 35 grams of acetylene, how many grams of 1,1,2,2-difluoroethane can I form?

4) Why would the reaction in problem 3 be extraordinarily dangerous to perform?

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1) When Cu reacts with AgNO3, Ag metal and Cu(NO3)2 are formed. If 35 grams of copper and an excess of silver nitrate are used to perform this reaction, how much silver metal will be formed?

118.1

2) Hydrofluoric acid (HF) is very dangerous. To neutralize it in an acid-base reaction, it is typically combined with aluminum hydroxide – Al(OH)3 – to form aluminum fluoride (AlF3) and water. If I have 12.5 grams of hydrofluoric acid that I need to neutralize, how many grams of aluminum hydroxide will I need to neutralize it?

16.3

3) When I add fluorine gas (F2) to acetylene (C2H2), 1,1,2,2-tetrafluoroethane (C2H2F4) is formed in a synthesis reaction. If I start this reaction with 25 grams of fluorine gas and 35 grams of acetylene, how many grams of 1,1,2,2-difluoroethane can I form?

42.1, 86.15

4) Why would the reaction in problem 3 be extraordinarily dangerous to perform?