

# Chemistry 2000 Spring 2006

## Solutions to the problems on elementary vs complex reactions

1. Certainly not elementary: too many reactants
2. Possibly elementary: The reaction is simple (just one bond made and one broken) and could occur in one step.
3. Certainly not elementary: Removing a carbon atom from the graphite sheets requires three bond breaking events. We also have to break the O<sub>2</sub> double bond, and make two carbon-oxygen double bonds. There are just too many changes to be made in a single step.