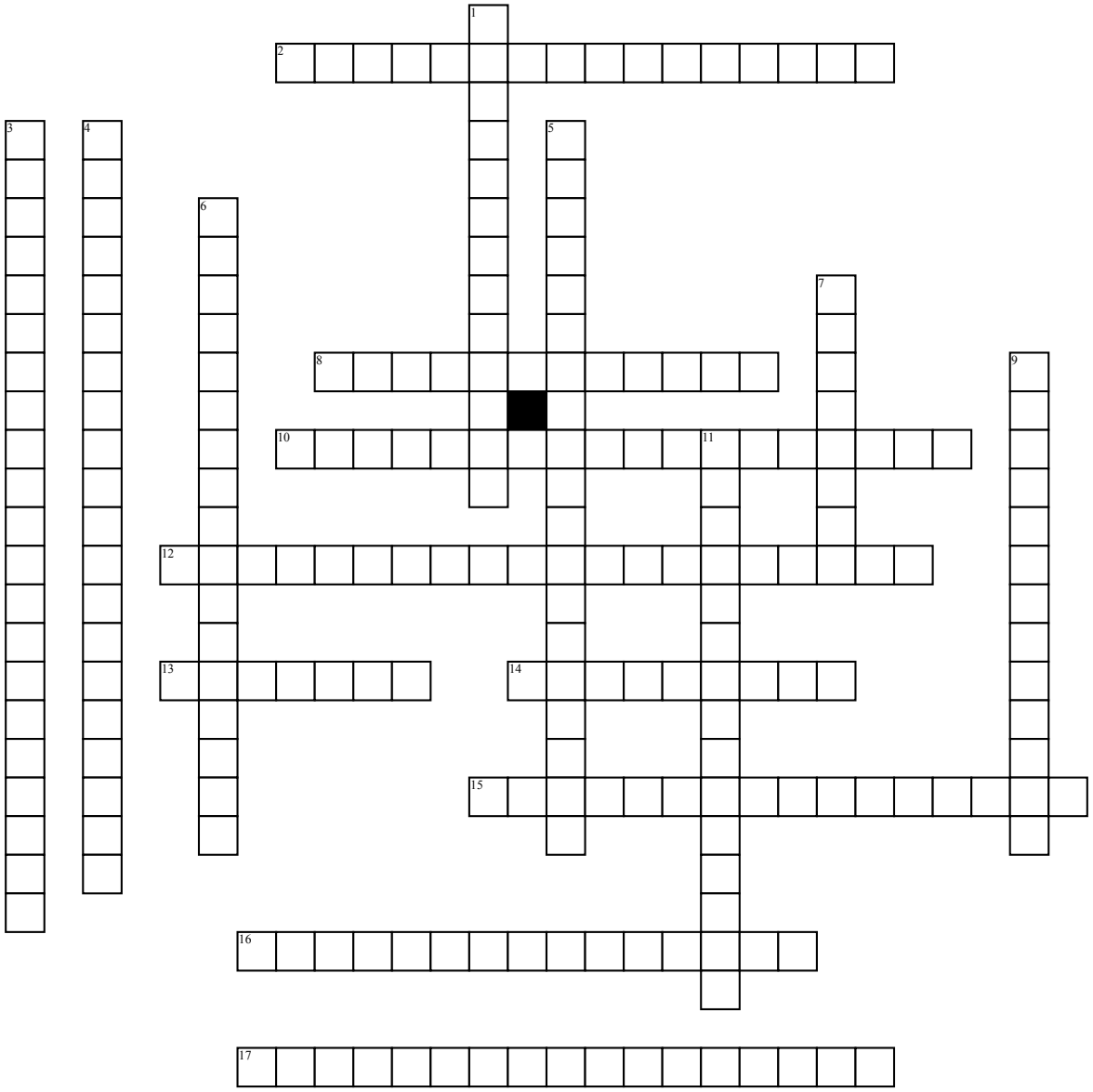
Name: _____ Date: _____ Period: _____

Chapter 16: Reaction Rates



Across

2. A chemical reaction that consists of two or more elementary steps
8. A substance produced in one elementary step of a complex reaction and consumed in a subsequent elementary step
10. A catalyst that exists in the same physical state as the reaction it catalyzes.
12. Determines the reaction order by comparing the initial rates of a reaction carried out with varying reactant concentrations
13. The mathematical relationship between the rate of a chemical reaction at a given temperature and the concentrations of reactants
14. A substance that slows down the reactions rate of a chemical reaction or prevents a reaction from happening
15. A short lived, unstable arrangement of atoms that can break apart and re-form the reactants or can form products; also sometimes referred to as the transition state.
16. The minimum amount of energy required by reacting particles in order to form the activated complex and lead to a reaction.
17. The rate of decomposition at a specific time, calculated from the rate law, the specific rate constant, and the concentrations of all the reactants

Down

1. For a reactant, describes how the rate is affected by the concentrations of that reactant
3. A catalyst that exists in a different physical state than the reaction it catalyzes.
4. A numerical value that relates reaction rate and concentration of reactant at a specific temperature
5. The slowest elementary step in a complex reaction; limits the instantaneous rate of the overall reaction
6. The complete sequence of elementary steps that make up a complex reaction
7. A substance that increases the rate of a chemical reaction by lowering activation energies but is not itself consumed in the reaction
9. The change in concentration of a reactant or product per unit time, generally calculated and expressed in moles per liter per second.
11. states that atoms, ions, and molecules must collide in order to react