

Reactions and Rates 2

Clicker Questions

Activity 2: Introduction to reaction kinetics

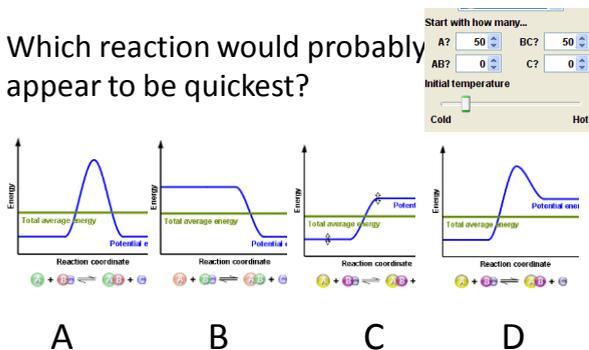
Trish Loeblein
PhET

Learning Goals

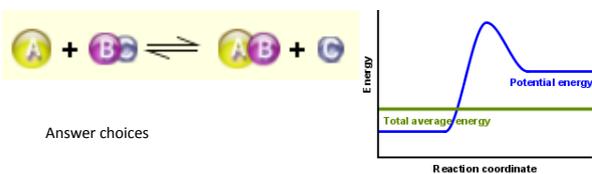
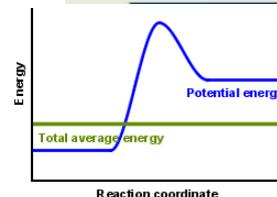
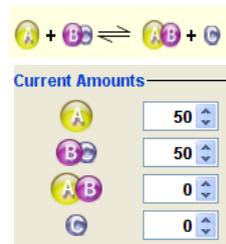
Students will be able to:

- Describe how the **reaction coordinate** can be used to predict whether a reaction will proceed including how the potential energy of the system changes.
- Describe what affects the potential energy of the particles and how that relates to the energy graph.
- Describe how the reaction coordinate can be used to predict whether a reaction will proceed **slowly, quickly or not at all**.
- Use the potential energy diagram to determine:
 - The *approximate* activation energy for the forward and reverse reactions.
 - The *sign* difference in energy between reactants and products.
- Draw a potential energy diagram from the energies of reactants and products and activation energy.

Which reaction would probably appear to be quickest?

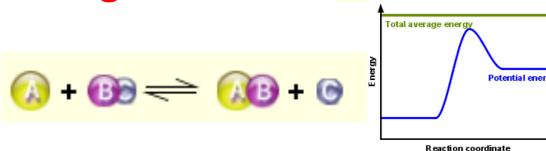


What would best describe what is in the container after several minutes have passed ?



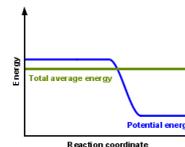
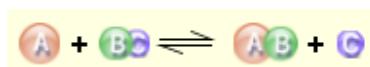
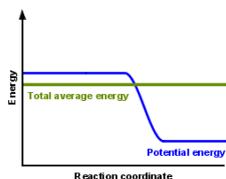
- A. Container will have only AB & C
- B. Container will have only A & B
- C. Container will have a mixture of all four with more AB & C
- D. Container will have a mixture of all four with more A & B

Using the heater  would



- A. Increase the number of A & B
- B. Increase the number of AB & C
- C. Have no effect

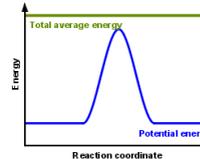
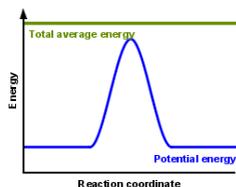
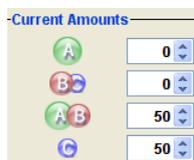
What would best describe what is in the container after several minutes have passed ?



Answer choices

- A. Container will have only AB & C
- B. Container will have only A & B
- C. Container will have a mixture of all four with more AB & C
- D. Container will have a mixture of all four with more A & B

What would best describe what is in the container after several minutes have passed ?



Answer choices

- A. Container will have mostly A & B
- B. Container will have mostly AB & C
- C. Container will have a mixture of all four with nearly equal amounts
- D. No reaction will occur since the products and reactants have the same energy