١.

A. Chemical :

B. :

- 1. Over time, the and the
- 2. Reaction rate varies with the type of reaction
- a. combustion =
  - b. rusting =

II. The Reaction Process

A. :

- 1. Theory states that reactants must for a reaction to occur.
- 2. BUT,
- 3. In order for an (creation of new products) to occur molecules a. (known as ).

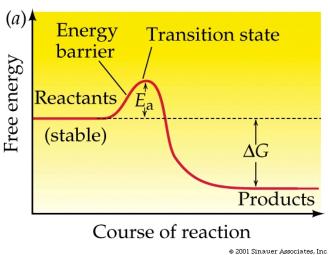
with:

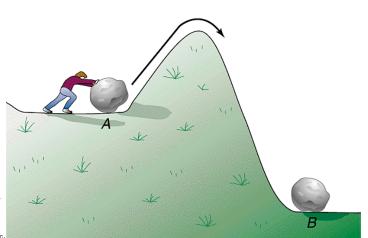
b. the

4. The

5. The minimum amount of

is called



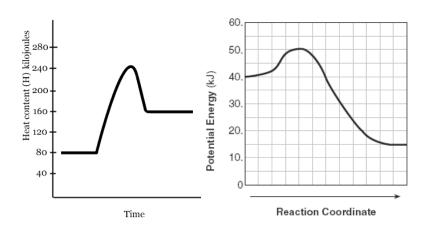


Is this an endothermic or exothermic reaction? : shows energy changes as a reaction proceeds.

a. When the

6.

- b. When the
- c. The activation energy of any reaction is the



## Kinetics - Chapter 17 III. Factors that Affect Reaction Rates : how complex and reactive the reactants are. A. В. as the 1. 2. This is due to an 3. Moving (two birds with one stone!) C. as the 1. for particles )! (but 2. = particle A particle B c) doc b D. 1. Rate increases as the pressure of reactants increases. 2. When pressure increases, 3. If you = (again )! 4. This is only true for E. will 1. An 2. Area = 6 x (1/2m)<sup>2</sup> x 8 = 12 m F. 1. in the reaction 2. 3. Catalysts by Area = $6 \times (1/3 \text{ m})^2 \times 27 = 18 \text{ m}^2$ Area = $6 \times (1/10,000 \text{ m})^2 \times 10^8 = 10^4 \text{ m}^2 = 2.5 \text{ acres}$ 4. In order to do this, the catalysts create a different pathway. Reaction without catalyst are the body's catalysts! e. -- Reaction with catalyst $E_a (\rightarrow) Y X$ $E_a (\rightarrow)XY$ Energy

Reaction path