Chp 8

8.1 Writing and balancing

(4) (1) (4) (4)
22a, 23, 24a,c, 25a,b

read Energy + Malnutrition p. 276

(4) (5) (5)
26a,b, 27, 28

- Kinetic view
- reactants/products
- conservation of mass

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- writing a chemical equation
  - * coefficients
  - * Bonds broken / bonds formed
  - * combustion rxns
- Balancing
  - * model p. 283
  - * 8.2 practice problem p. 283
- stoichiometry

8.2 Energy and Chemical Rxns

(1) (2) (4) (4)
30, 31, 33a,b, 34a,b

- energy, work
- bioenergetics

(2) (2) (2) (4) (2)
36, 37, 38, 39, 40

- Units of energy in science and nutrition

(1) (6) (4)
41, 43a,c, 44

  - * calorie / joule 1 cal = 4.187 J
  - * 8.4 + 8.6 p. 288

(2) (3) (4) (2)
45, 47, 48, 49

(2)
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- Heat Energy
  - * change in enthalpy, ΔH

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8.2 cont'd

- Exothermic / Endothermic
  * energy diagram
  * 8.7 - 8.9 p. 290

- Calorimetry
  * nutritional facts

- Overview of energy & metabolism
  * biochemical rxns / biochemical pathway
    - catabolic / anabolic
  * metabolism
  * ATP
  * 8.13 - 8.14 p 294

8.3 Kinetics: Reaction Rates

(1) (1) (8) (3) (2)
51, 52, 53, 54, 55

- chemical kinetics
- reaction rate

(5) (2) (2) (6)
56, 57, 58, 60

- Activation Energy E_A
  * diagrams
  * 8.15 + 8.16 p. 296

(5) (6) (5) (3)
61, 62, 63, 65

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- Factors Affecting the rate of a reaction
  * concentration
  * Temperature
  * catalyst
    - enzymes
  * 8.17 - 8.20 p. 299

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(2) (2) (4) (2)
68, 69, 70, 71

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