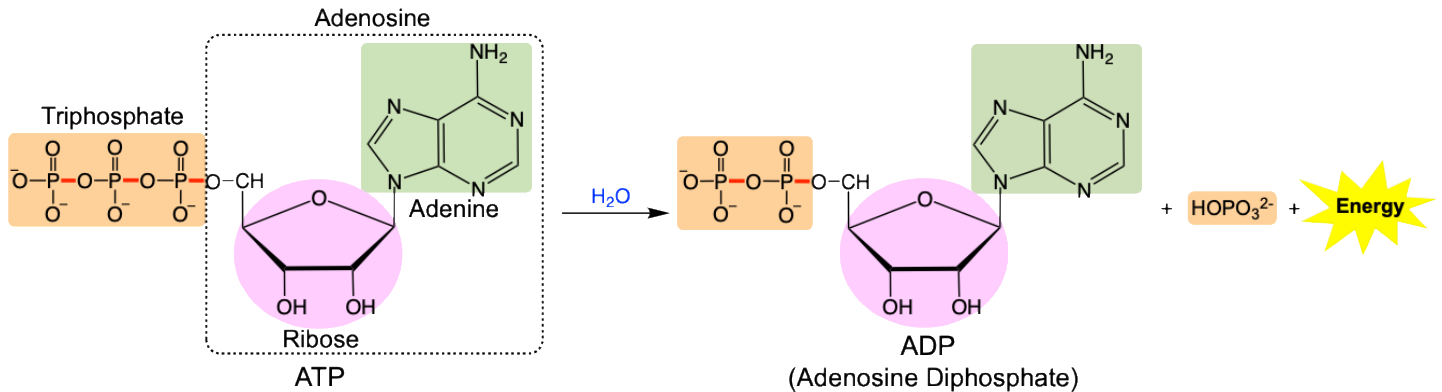


CONCEPT: ATP AND ENERGY

Adenosine Triphosphate (ATP)

- Energy obtained from food catabolism is stored in _____ molecules.
- **ATP** is a _____ compound, stores and transports energy.
 - Has high-energy _____ **bonds**.
 - Hydrolysis of ATP yields **Energy**.



- **Note:** Hydrolysis of ADP produces _____ (Adenosine Monophosphate) + **Energy**.

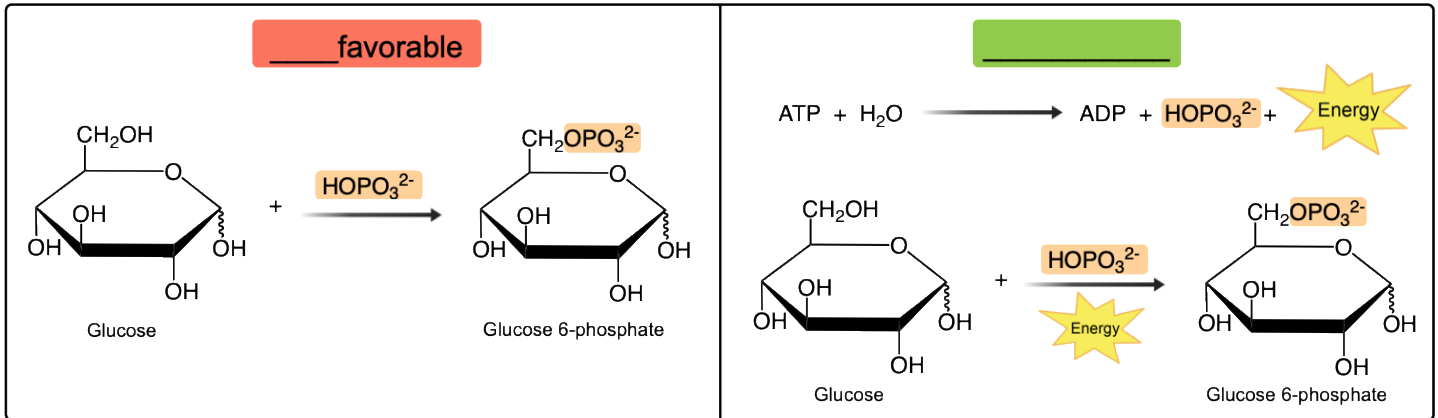
EXAMPLE: Which components make up the structure of ATP?

- a) Adenine, ribose sugar, and one phosphate group.
- b) Adenosine, ribose sugar, and two phosphate groups.
- c) Adenine, ribose sugar, and three phosphate groups.
- d) Adenosine, ribose sugar, and three phosphate groups.

CONCEPT: ATP AND ENERGY

Coupled Reactions

- Not every reaction in metabolic pathways is _____.
 - Need to _____ with favorable (exothermic) reactions, such as ATP hydrolysis.
 - Serves as energy source to _____ unfavorable reactions.



EXAMPLE: Formation of sucrose from glucose and fructose is coupled with ATP hydrolysis. What role does ATP play?

- Transfer energy to drive endothermic reaction.
- To act as a catalyst.
- Speed up the rate of the reaction.
- Absorb energy from the surroundings.