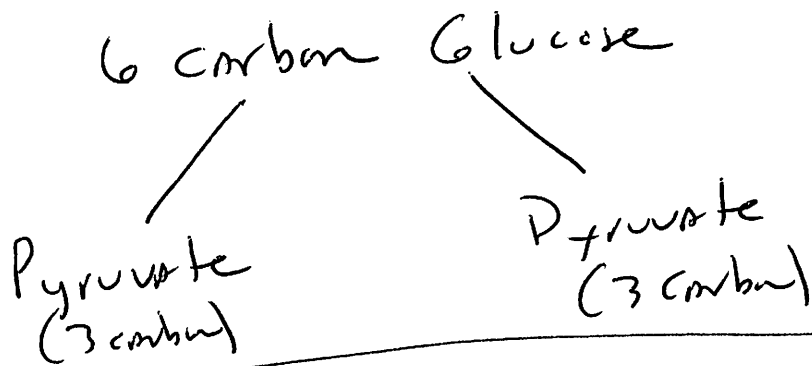
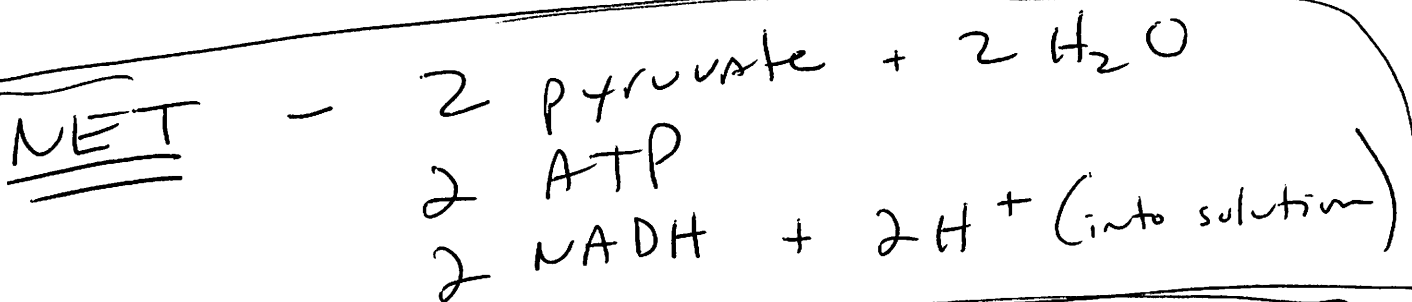


7.2 Glycolysis



- (1) Occurs in Cytoplasm
- (2) Occurs whether O_2 is present or not
- (3) NO CO_2 released during glycolysis
- (4) bacteria, archaea, and eukaryotes all do glycolysis



ATP is generated by SUBSTRATE-LEVEL Phosphorylation

⇒ Glycolysis starts with Hexokinase transferring a Phosphate Group to the Glucose molecule (from ATP)

⇒ A second ATP donates a phosphate group by the action of phospho fructokinase

✱ so 2 ATP are inputs.

→ 10 steps - Glycolytic Pathway

Enzyme-catalyzed

key enzymes [recognition purposes only - don't memorize]

Hexokinase

Phosphoglucoisomerase

Phospho fructokinase

Aldolase

Isomerase

Triose phosphate dehydrogenase $\text{NAD}^+ \rightarrow \underline{\underline{2\text{NADH}}} + 2\text{H}^+$

Phosphoglycerokinase

Phosphoglyceromutase

Enolase

Pyruvate kinase

Intermediate compounds of Glycolysis

[recognition purpose only]

Glucose 6-phosphate

Fructose 6-phosphate

Fructose 1,6-bisphosphate

Glyceraldehyde 3-phosphate (G3P)



Dihydroxyacetone phosphate (DHAP)

1,3-Bisphospho-glycerate

3-Phospho-glycerate

2-Phospho-glycerate

Phosphoenol-pyruvate (PEP)

Pyruvate

6
carbon

3
carbon