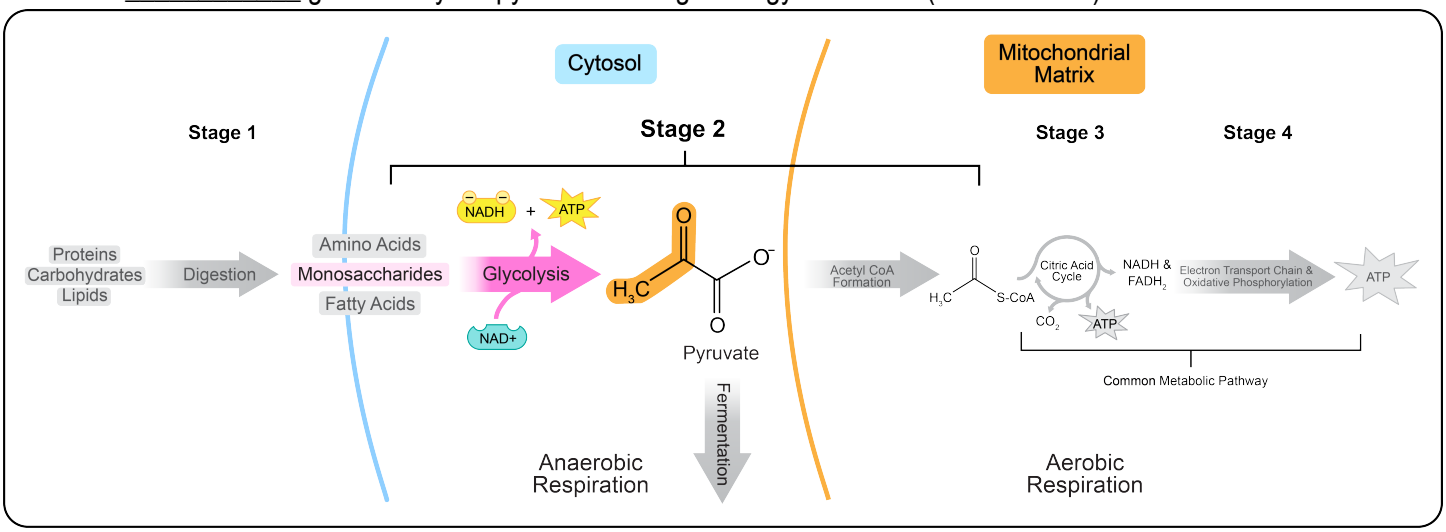
CONCEPT: INTRO TO GLYCOLYSIS

- Glycolysis is part of stage 2 of carbohydrate catabolism.
  - □ _____ glucose to yield pyruvate and high-energy molecules (ATP & NADH).



- Takes place in the _____ (*outside* mitochondria) and does not require oxygen.

EXAMPLE: Which one of the following molecules is not a product of glycolysis?

a) Pyruvate

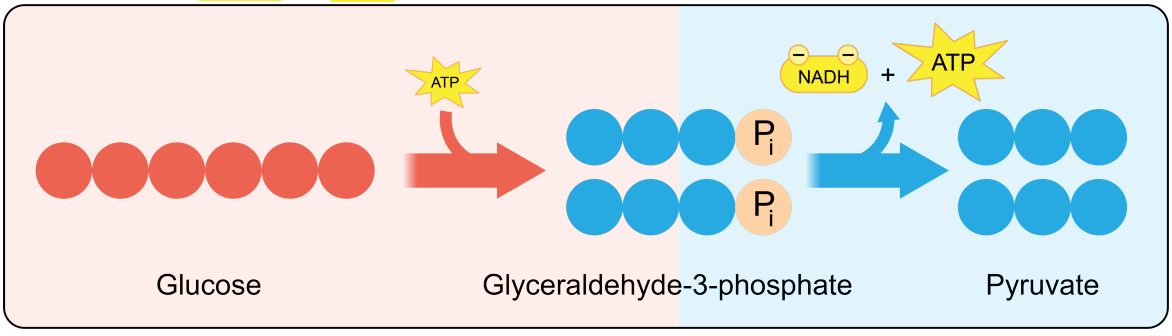
b) NADH

c) ATP

d) Acetyl CoA

Phases of Glycolysis

- Glycolysis is a _____ catabolic pathway that consists of ___ phases:
  - **A** **Energy-Consuming Phase:** Phosphorylation and bond _____ reactions split a glucose molecule.
    - □ Produces ___ molecules of glyceraldehyde-3-phosphate (G3P).
    - □ Consumes _____.
  - **B** **Energy-Producing Phase:** _____ and dephosphorylation convert glyceraldehyde-3-phosphate to pyruvate.
    - □ Produces NADH and ATP.



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EXAMPLE: Which of the following statements is incorrect about glycolysis?

a) Glycolysis produces pyruvate, NADH, and ATP.

b) The first phase of glycolysis does not produce any energy.

c) Phase B of glycolysis produces 2 molecules of glyceraldehyde.

d) Glycolysis produces more energy than it consumes.

PRACTICE: Which one of the following molecules is a source of energy in the energy-consuming phase of glycolysis?

a) NADH

b) $FADH_2$

c) ATP

d) Acetyl CoA

PRACTICE: How many carbon atoms are lost when one glucose molecule undergoes glycolysis?

a) 0

b) 2

c) 1

d) 3