

Name: _____

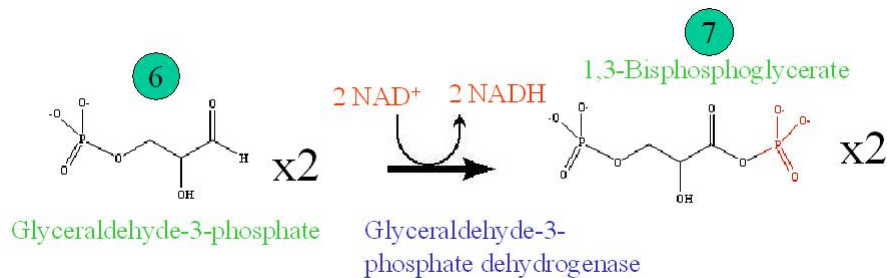
Date: _____

[3 pt] 1. What are **three** major differences between the Embden-Meyerhof Pathway and the Citric Acid Cycle?

[3 pt] 2. What is the net chemical reaction that occurs during Embden-Meyerhof pathway?

[3 pt] 3. What is the net chemical reaction that occurs during glycolysis?

[7 pt] 4. The following reaction is part of the glycolysis pathway.



(a) What type of reaction is occurring? Describe chemically what is occurring to in this step.

(b) Is this step adding or removing energy from the cell? Explain.

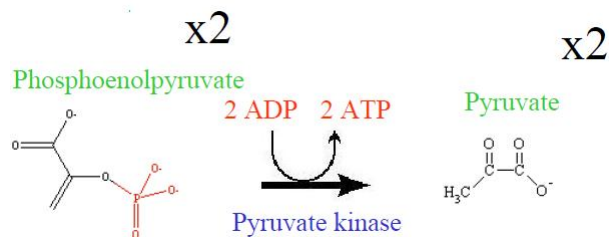
(c) What is oxidized in this reaction? What is reduced in the reaction? Explain.

(d) Is this step an example of catabolic or anabolic metabolism? Explain.

(e) What enzyme catalyzes this reaction?

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[7 pt] 5. The following reaction is part of the glycolysis pathway.



- (a) Describe chemically what is occurring in this step.
- (b) Is this step adding or removing energy from the cell? Explain.
- (c) What is oxidized in this reaction? What is reduced in the reaction? Explain.
- (d) Is this step an example of catabolic or anabolic metabolism? Explain.
- (e) What enzyme catalyzes this reaction?

[7 pt] 6. Answer the following questions (T) rue or (F)alse. Correct the false statements in the space provided.

- (a) The Embden-Meyerhof pathway is aerobic. 6(a) _____
- (b) The Embden-Meyerhof pathway is catabolic. 6(b) _____
- (c) The end product of the Embden-Meyerhof pathway in humans is ethanol. 6(c) _____
- (d) The net reaction that occurs in muscles is: Lactate \longrightarrow Glucose + Energy. 6(d) _____
- (e) Energy storage in plants is an exothermic process. 6(e) _____