

9.3: Exercises

Problems

1. What are the three stages of cellular respiration?
2. What is the purpose of glycolysis?
3. What is the output of glycolysis from a single glucose molecule?
4. How many molecules of ATP are "invested" in glycolysis? How many are produced?
5. Name the enzymes that are key regulatory sites in Glycolysis.
6. Draw the entire pathway for glycolysis including enzymes, reactants and products for each step.
8. How many enzymes are unique to Gluconeogenesis?
9. What is reciprocal regulation and why is it important to Glycolysis and Gluconeogenesis?
10. Where does the activity of glucose-6-phosphatase occur?
11. Why is it necessary for gluconeogenesis to incorporate other enzymes in its pathway that are different from glycolysis?
12. Why is it important for organisms to conserve energy?

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