

Electron Carrier System: Glucose Metabolism

1. Write the three steps of ATP's overall reaction:
 - a. _____
 - b. _____
 - c. _____
2. The potential energy in ATP is released when the terminal high-energy bond is broken by a process called _____.
Write the total products of this process: ATP → ADP + _____
3. Rebuilding ATP uses ATP with a new source of energy to create another ATP. This process is called _____.
Write the equation for this process: _____ → ATP + _____
4. Write three processes that require additional ATP when ATP supplies are low:
 - a. _____
 - b. _____
 - c. _____
5. An immediate source of energy is _____ (ATP), but the supply is limited and rapidly depleted.
One molecule of ATP produces _____ ATP.
6. Glucose is a major source of energy for synthesizing ATP. List the two sources of glucose:
 - a. _____
 - b. _____
7. _____ is the process that breaks down glucose.
Name two products of the breakdown of glucose:
 - a. _____
 - b. _____