

- Glucose enters cells by \_\_\_\_\_.  
(A) simple diffusion  
**(B) facilitated diffusion**  
(C) active transport  
(D) aquaporin channels
- Glycolysis \_\_\_\_\_.  
(A) requires oxygen  
**(B) requires 2 ATP molecules to begin**  
(C) requires 2 molecules of NADH  
(D) requires pyruvate
- Which statement about glycolysis is not true?  
(A) The products of glycolysis enter the Krebs's cycle.  
**(B) Oxygen allows glucose to bypass glycolysis and enter mitochondria directly.**  
(C) Glycolysis occurs outside mitochondria.  
(D) Glycolysis produces NADH.
- Which statement about glycolysis is not true?  
**(A) Glycolysis requires oxygen.**  
(B) Glycolysis requires  $\text{NAD}^+$ .  
(C) Glycolysis produces a net of 2 ATP for every molecule of glucose.  
(D) Glycolysis produces 2 molecules of pyruvate for every molecule of glucose.
- Which statement is not true?  
**(A) Oxygen, pyruvate, and NADH enter the mitochondrion to make acetyl coenzyme A.**  
(B) Water, ATP, heat, and carbon dioxide exit the mitochondrion.  
(C) Pyruvate dehydrogenase is needed to make carbon dioxide.  
(D) Carbon dioxide molecules are made from molecules of pyruvate.
- Which statement about the Krebs's cycle is not true?  
(A) The Krebs's cycle makes carbon dioxide.  
(B) The Krebs's cycle makes NADH.  
(C) The Krebs's cycle makes  $\text{FADH}_2$ .  
**(D) The Krebs's cycle releases acetyl groups from six-carbon citrate groups.**
- $\text{NADH}$  and  $\text{FADH}_2$  provide energy for \_\_\_\_\_.  
**(A) oxidative phosphorylation to pump protons into the intermembrane space of a mitochondrion**  
(B) oxidative phosphorylation to pump protons into the matrix of the mitochondrion  
(C) oxidative phosphorylation to split water molecules apart  
(D) oxidative phosphorylation to split oxygen molecules apart

8. Oxidative phosphorylation removes energy from high-energy electrons to make ATP. The electron is then used to make molecules of \_\_\_\_\_.

- (A) **water**
- (B) oxygen
- (C) carbon dioxide
- (D) NADH

9. Both chloroplasts and mitochondria make ATP by allowing protons to flow out of the \_\_\_\_\_.

- (A) intermembrane space of mitochondria and interior of thylakoids.
- (B) matrix of mitochondria and the stroma of the thylakoid.
- (C) intermembrane space of mitochondria and stroma of the chloroplast.
- (D) **matrix of mitochondria and the interior of thylakoids.**

10. Uncoupling of mitochondria results in \_\_\_\_\_.

- (A) more ATP being made
- (B) **more heat being made**
- (C) more water being made
- (D) more carbon dioxide being made