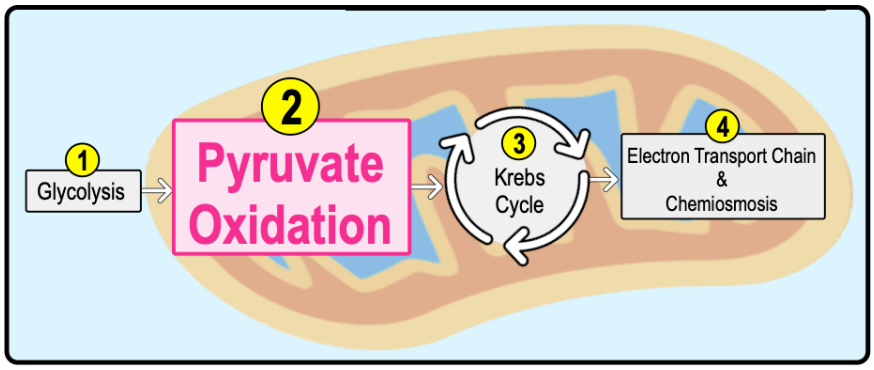
CONCEPT: PYRUVATE OXIDATION

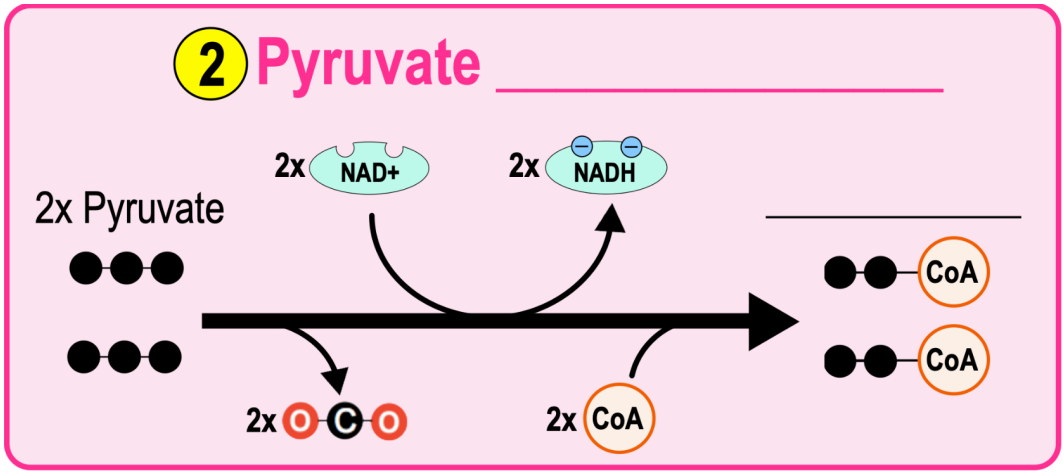
●*Recall:* Glycolysis *results* in _____ pyruvate molecules, which are then transported to the *mitochondrial* _____.

●**Pyruvate Oxidation**: 2nd step of cellular respiration that converts each *pyruvate* into a molecule of *Acetyl-*_____.

□ Occurs in *mitochondrial matrix* & produces ___ acetyl-CoA, ____ NADH, & ____ CO_2 molecules (per 1 glucose).

EXAMPLE: Pyruvate Oxidation.





PRACTICE: Each of the following describes the pyruvate oxidation reaction except that _____.

a) It connects glycolysis to the citric acid cycle.
b) Each pyruvate is converted to an acetyl-CoA molecule.
c) NAD^+ is reduced to NADH.
d) This reaction occurs within the cytoplasm.
e) Carbon dioxide is released as a by-product.

PRACTICE: In aerobic cellular respiration, pyruvate molecules must be transformed through a process called pyruvate oxidation before they can be broken down in the Krebs Cycle. What are the products of pyruvate oxidation?

a) Acetyl CoA, O_2, and ATP.
b) Acetyl and CO_2.
c) Acetyl CoA, $FADH_2$, and CO_2.
d) Acetyl CoA, NADH, and CO_2.
e) Acetyl CoA, NAD^+, ATP, and CO_2.