**Glycolysis, Formation of Acetyl CoA, and Kreb’s Cycle practice**

**Part A: Glycolysis**

1. Fill in all the ovals with the following words on glycolysis. Some will be used more than once.

ADP

ATP

G3P/PGAL

Glucose

Glucose

NAD+

NADH

Phosphate (P)

Pyruvate

1. List the number of carbons presented in the compounds labeled a, b, and c?
2. **Type III:** On a separate sheet of paper explain to a future biology student who you are tutoring the process of glycolysis. Be sure to use and underline the **terms listed in #1 as well as anaerobic, oxygen, and cytoplasm**. (*Include the total numbers of each molecule from one molecule of glucose)*

**Part B: Formation of Acetyl CoA and Kreb’s Cycle.**

1. Fill in all the ovals with the following words on formation of acetyl CoA and Kreb’s cycle. Some will be used more than once.

Acetyl CoA

ADP

ATP

citric acid (citrate)

Co A (coenzyme A)

CO2

FADH2

Kreb’s cycle

NAD+

NADH

oxaloacetate

pyruvate

1. What is another name for the Kreb’s cycle?
2. Where do the Formation of acetyl CoA and Kreb’s Cycle occur in eukaryotic cells? (BE SPECIFIC)
3. List the number of carbons presented in the compounds labeled a, b, c, and d?
4. What is the molecule labeled a? Where is it formed (step)? How many of them enter the formation of acetyl CoA?
5. What is molecule labeled b? How many of them enter the Kreb’s Cycle?
6. **Type III:** On a separate sheet of paper explain to a future biology student who you are tutoring the formation of acetyl CoA and the Kreb’s cycle. Be sure to use and underline the **terms listed in #1 from part B as well as aerobic, oxygen, and matrix of mitochondria**. (*Include the total numbers of each molecule from one molecule of glucose)*

**PART C: FILL IN THE FOLLOWING CHART FOR THE AMOUNT PRODUCED IN EACH STEP**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **GLYCOLYSIS** | **FORMATION OF ACETYL CoA** | **KREBS CYCLE (BOTH TURNS COMBINED)** | **TOTALS** |
| **ATP** | **\_\_\_\_ (\_\_\_\_NET)** |  |  |  |
| **NADH** |  |  |  |  |
| **CO2** |  |  |  |  |
| **FADH2** |  |  |  |  |