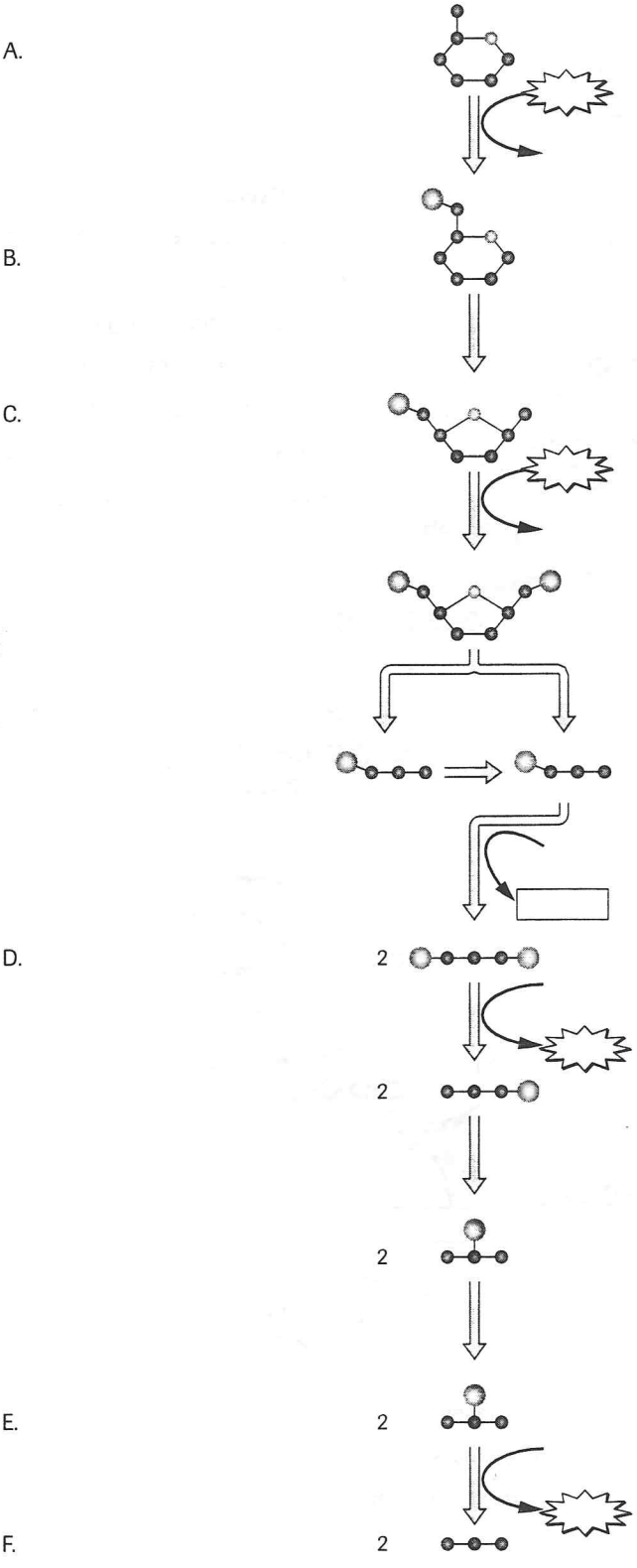
Glycolytic Pathway

Fill in the blanks on the right side of the worksheet and in the steps of glycolysis. Also fill in the molecule names A to F.



1. Glucose Activation

During the first four steps of glycolysis, _____ are transferred to _____ via _____, where _____ is converted to _____. The end product is _____.

2. Sugar Splitting

_____ gets split into two fragments, _____ and _____. _____ then gets converted into _____.

3. Oxidation

Both molecules of _____ become oxidized using _____, which becomes _____. This process releases _____, which is used to attach _____ to the sugars, making them _____.

4. Formation of ATP

During the last four steps of glycolysis, the _____ groups of the molecules are transferred to _____, creating _____. This is done via the process of _____.

carbon oxygen phosphate

The Krebs Cycle

Fill in the molecules created or released during the Krebs cycle. Fill in the blanks of the summaries.

Pyruvate Oxidation

_____ enters the mitochondrion from the cytoplasm.

One _____ atom is removed via _____ and

_____ is removed using _____. _____

becomes attached to the remaining _____ atoms,

creating _____, which then enters the Krebs cycle.

Krebs Cycle

_____ enters the cycle and then combines

with _____ to make the six-carbon compound

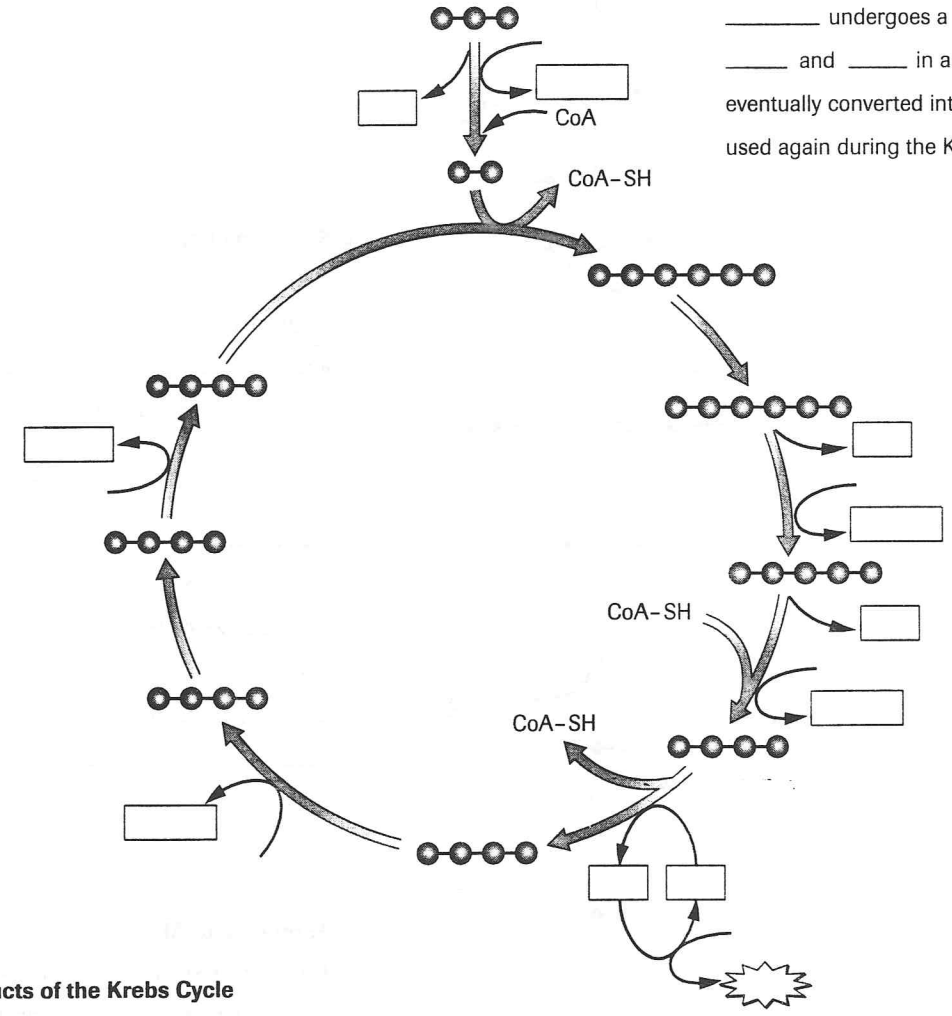
_____. During the eight steps of the Krebs cycle,

_____ undergoes a number of reactions, releasing

_____ and _____ in a number of steps. _____ is

eventually converted into _____ so it can be

used again during the Krebs cycle.



Products of the Krebs Cycle

1. _____ is released as waste.
2. _____ and _____ move to the next stage of cellular respiration.
3. Energy is released in the form of _____. A glucose molecule produces _____ molecules of _____ because two molecules of _____ are created from each molecule of _____.