1. Where does glycolysis occur in the cell?
2. What goes in to glycolysis, what comes out? Which 2 high energy molecules are produced and how many of each?
3. A chain of carbons that is ____ carbons long enters glycolysis, and a chain of carbons that is ____ carbons long exits?
4. A net of ____ ATP and ____ NADH are produced in glycolysis?
5. Two 3-carbon pyruvate molecules exit glycolysis. What occurs during transition to Kreb's cycle?
6. What is gained during the transition between glycolysis and Kreb's Cycle? (How many?)
7. Where does cellular respiration occur in the cell?
8. What is anaerobic respiration?
9. What is the final product of fermentation as carried out by yeast?
10. During periods of intense activity, human muscles can become depleted of oxygen (localized anaerobic conditions). What is fermented?
11. What is aerobic respiration?
12. What two major processes will be undertaken when oxygen is present for respiration?
13. How many CO\(_2\) are released every turn of the Kreb’s Cycle?
14. Why is Kreb's Cycle also known as the Citric Acid Cycle?
15. A balance of how many carbon atoms must be maintained in the Citric Acid Cycle in order for it to continue to cycle?
16. Which 3 energy rich molecules are produced during Kreb’s Cycle? (how many of each)
17. At the Electron Transport System (ETS), the NADH and FADH\(_2\) produced in Kreb’s Cycle, Transition, and Glycolysis are “cashed in” producing 36 ATP. Explain how this happens (the process is technically known as oxidative phosphorylation).
18. Why do animals like humans require oxygen?
19. One glucose is respired aerobically. Complete the chart.

<table>
<thead>
<tr>
<th>Process</th>
<th>Number &amp; Type of Energy Rich Molecule</th>
<th>Number of ATP Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycolysis</td>
<td>1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2)</td>
<td></td>
</tr>
<tr>
<td>Transition</td>
<td>1)</td>
<td></td>
</tr>
<tr>
<td>Kreb’s Cycle</td>
<td>1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2)</td>
<td></td>
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<tr>
<td></td>
<td>3)</td>
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</tr>
</tbody>
</table>

Label the following and indicate where each of the 3 stages of respiration occurs.