**Glycolysis**

|  |  |
| --- | --- |
| Location in cell | cytoplasm |
| Aerobic/Anaerobic | anaerobic |
| Reactants | glucose, ATP, ADP, NAD+, Pi |
| Products | 2 pyruvate, ADP, ATP, NADH |
| ATP produced | 2 |
| NADH produced | 2 |
| FADH2 produced | 0 |

**Krebs**

|  |  |
| --- | --- |
| Location in cell | mitochondrial matrix |
| Aerobic/Anaerobic | aerobic |
| Reactants | 2 pyruvate, NAD+, FAD, ADP |
| Products | NADH, FADH2, ATP |
| ATP produced | 2 per glucose |
| NADH produced | 8 |
| FADH2 produced | 2 |

**ETC**

|  |  |
| --- | --- |
| Location in cell | Mitochondrial cristae |
| Aerobic/Anaerobic | aerobic |
| Reactants | NADH + H+, FADH2, H+, O2, ADP, Pi |
| Products | NAD+, FAD, H2O, ATP |
| ATP produced from ETC | 32 |
| ATP produced from NADH | 8 x 3= 24 plus 2x2\* (or 3)= 4 \* *(NADH from glycolysis)* |
| ATP produced from FADH2 | 2 x 2 = 4 |
| TOTAL ATP from Cellular respiration (all 3 phases) | 36-38 \* *(depends on path that NADH electrons take to get into the mitochondrion)* |