

NAME: _____

Quiz 20

1. There are _____ total C-C and C-H bonds present in glucose.
2. The complete oxidation of glucose via glycolysis and the TCA cycle yields _____ NADH and _____ FADH₂. Compare to #1.
3. The complete oxidation of the number of NADH and FADH₂ indicated in #2 to NAD⁺ and FAD via the electron transport chain will transfer _____ electrons to O₂ creating _____ H₂O.
4. The transfer of the number of electrons indicated in #3 to O₂ is coupled to the development of a gradient of _____ protons across the inner mitochondrial membrane.
5. Every _____ protons that pass from the mitochondrial inner membrane space to the mitochondrial matrix through ATP synthase yields _____ ATP. The complete oxidation of glucose via glycolysis, the TCA cycle, the electron transport chain, and ATP synthase yields _____ ATP.

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