

# The Numbers of Cellular respiration.

✱ 1 Glucose gives in glycolysis:

- 1) 2 Pyruvates
- 2) 4 ATP (2 Net ATP)
- 3) 2 NADH
- 4) 2 H<sub>2</sub>O

✱ After glycolysis, the <sup>2</sup>Pyruvates undergo oxidation, and yield:

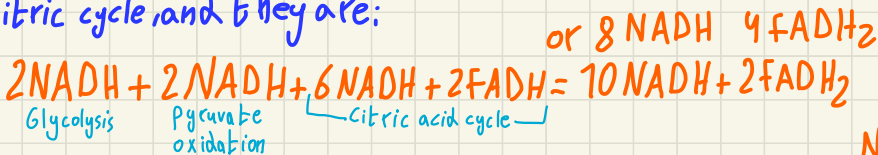
- 1) 2 NADH (1 each)
- 2) 2 CO<sub>2</sub> (1 each) → ✱ The first CO<sub>2</sub> produced in the cellular respiration.
- 3) 2 Acetyl CoA (1 each) cellular

✱ Krebs cycle yield from a single Acetyl CoA. ✱ As in for the whole <sup>cellular</sup> respiration process, we multiply all the following numbers by 2:

- 1) 3 NADH
- 2) 2 CO<sub>2</sub>
- 3) 1 FADH
- 4) 1 ATP

✱ In oxidative phosphorylation, we work with all of the e<sup>-</sup>

In NADH and FADH<sub>2</sub> produced in Glycolysis and Pyruvate oxidation and the Citric cycle, and they are:



or 8 NADH 4 FADH<sub>2</sub>

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The number of ATP is between 26 and 28 ATP ( $x$  NADH  $\cdot$  2.5 +  $y$  FADH  $\cdot$  1.5)

~~The~~ The overall ATP from 1 glucose is 30 or 32

~~The~~ The 2 NADH of glycolysis when they shuttle their  $e^-$  in the mitochondrion can either get accepted by 2 NADH or 2 FADH<sub>2</sub>  
The reason for this