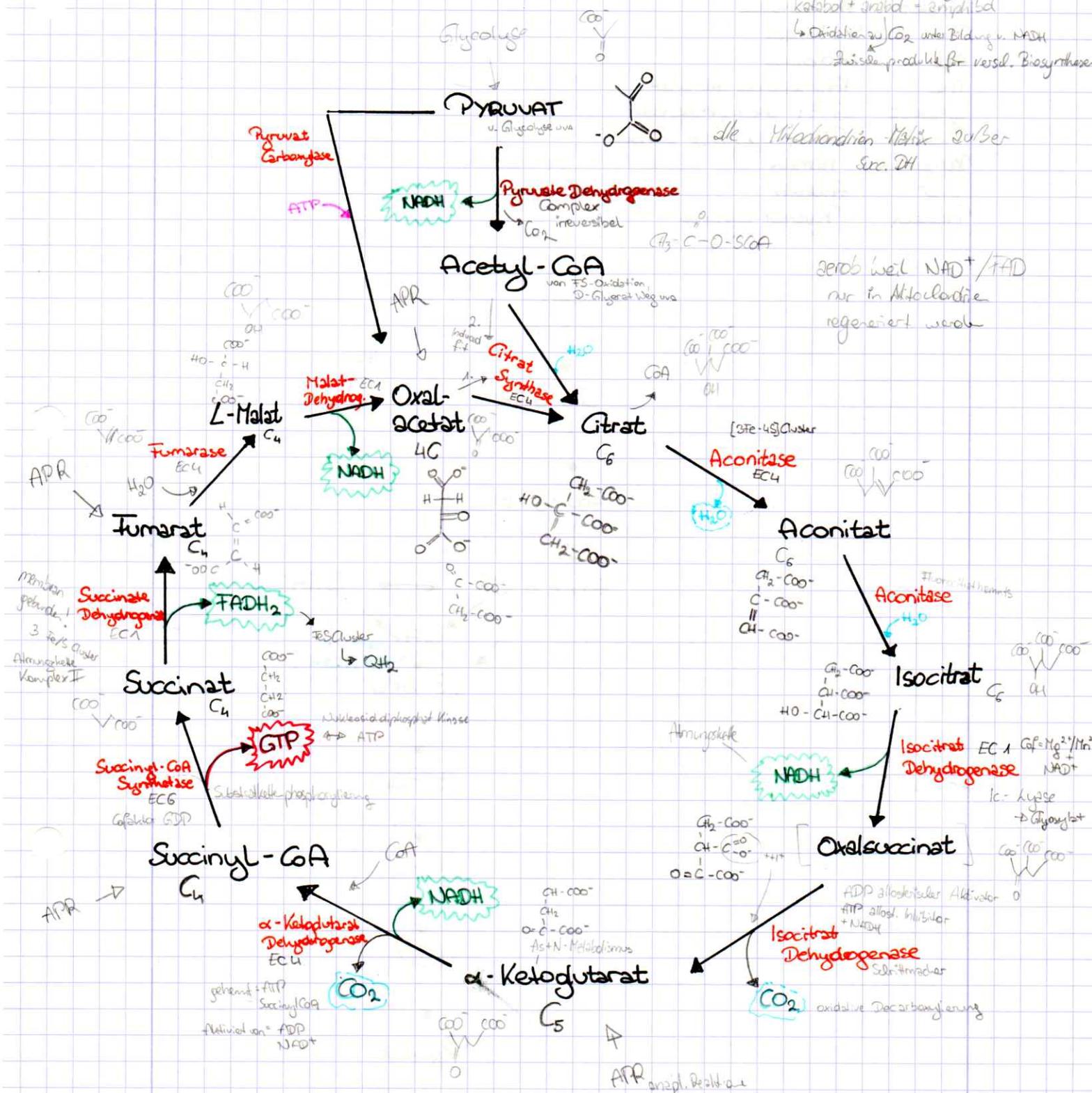


ZITRONENSÄURE ZYKLUS

CITRAT / KREBS / TCA

nur unter aeroben Bedingungen
 CO_2 nicht aus Acetyl-CoA
 katabol + anabol + anabol
 \hookrightarrow Decarboxylierung zu CO_2 unter Bildung von NADH
 Zwischenprodukte für versch. Biosynthesen



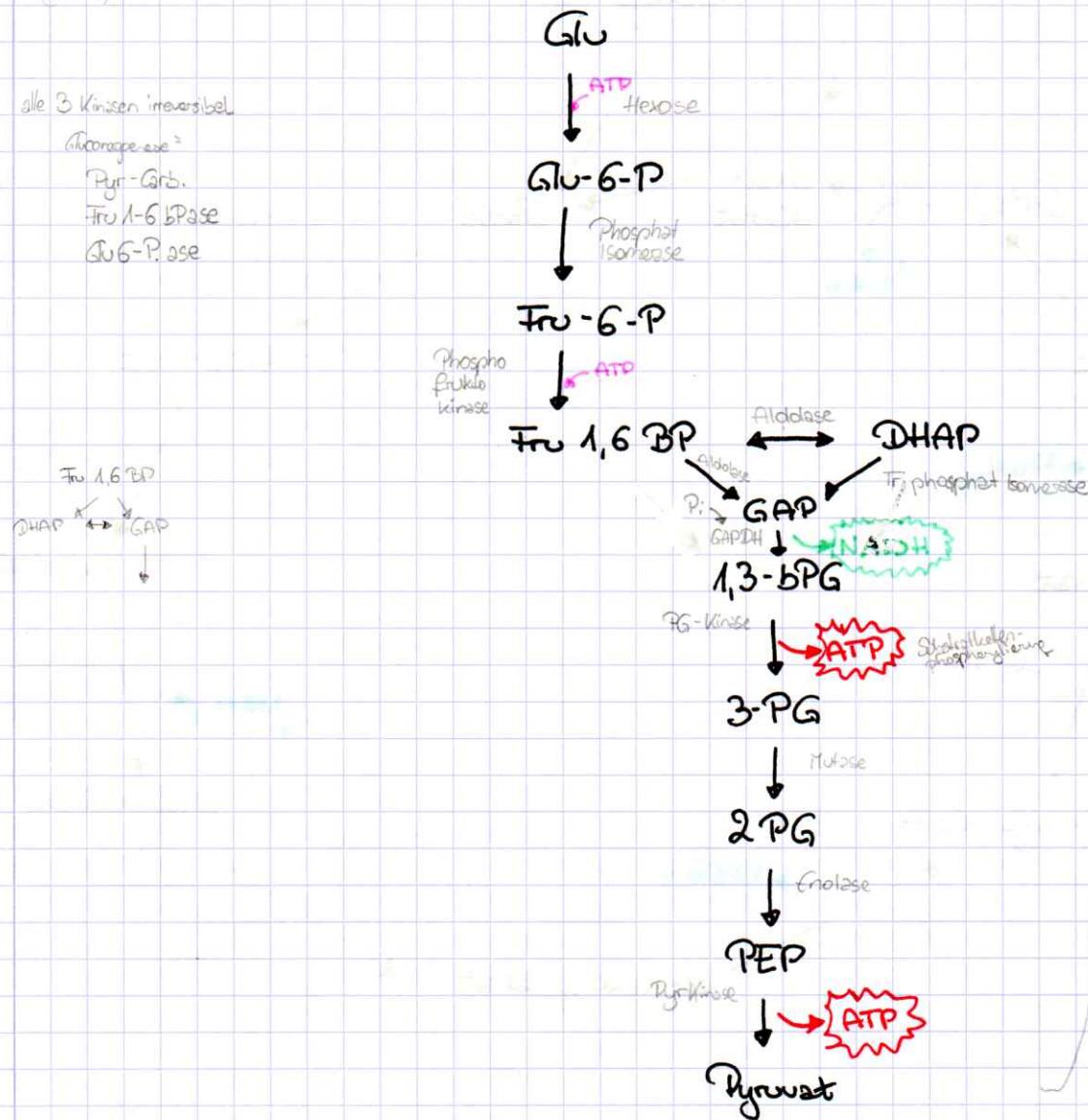
katabol: Endoxidation d. Nahrungssstoffe
 anabol: stellt Zwischenprodukte bereit

nachgeschaltete Atmungskette:
 $1 \text{ NADH} \rightarrow 3 \text{ ATP}$ 2,5
 $1 \text{ FADH}_2 \rightarrow 2 \text{ ATP}$ 1,5

GLYCOLYSE

Hungry Pirates Pick All The greatest Pickled Pumpkins ever Picked
 Hexose Hexokinase/Glucokinase Faktor = Mg^{2+} Hemmung d. G6P
 Ph. Isomerase
 P-Kinase
 Aldolase
 Triphosphate Isomerase TIM-barrel typische Struktur
 G3P Dehydrogenase \rightarrow NADH
 Phosphoglycerat Kinase + Mg^{2+}
 Mutase Copf: 2,3 Bisphosphoglycerat (Help, Hammie) 2 NADH
 Enolase 2 ATP
 Pyruvat Kinase Mg^{2+}, K^+

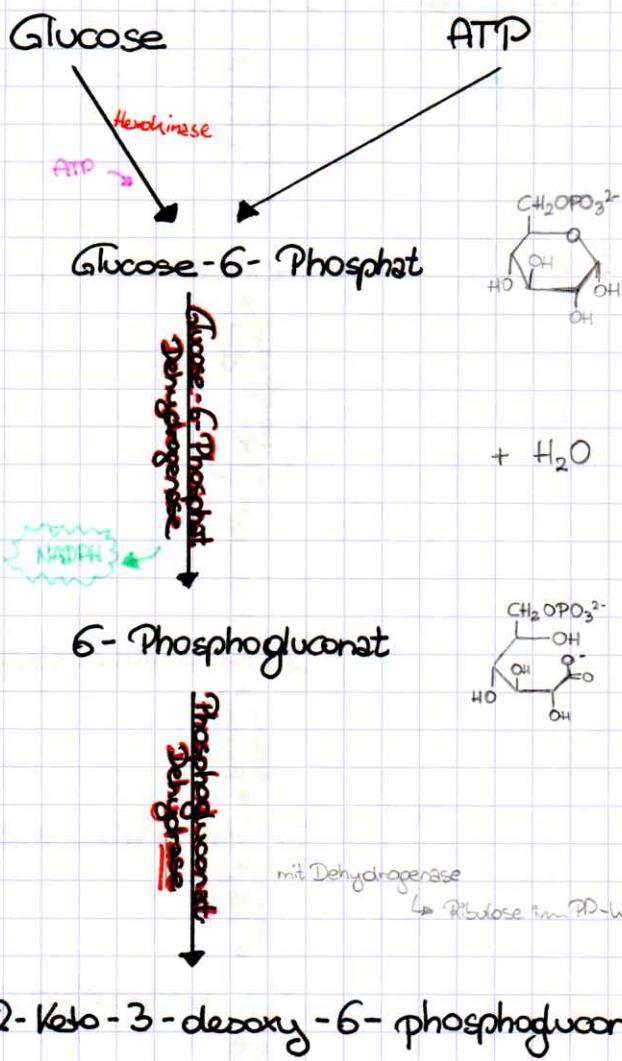
$$1 \cdot (3+7) = 10$$



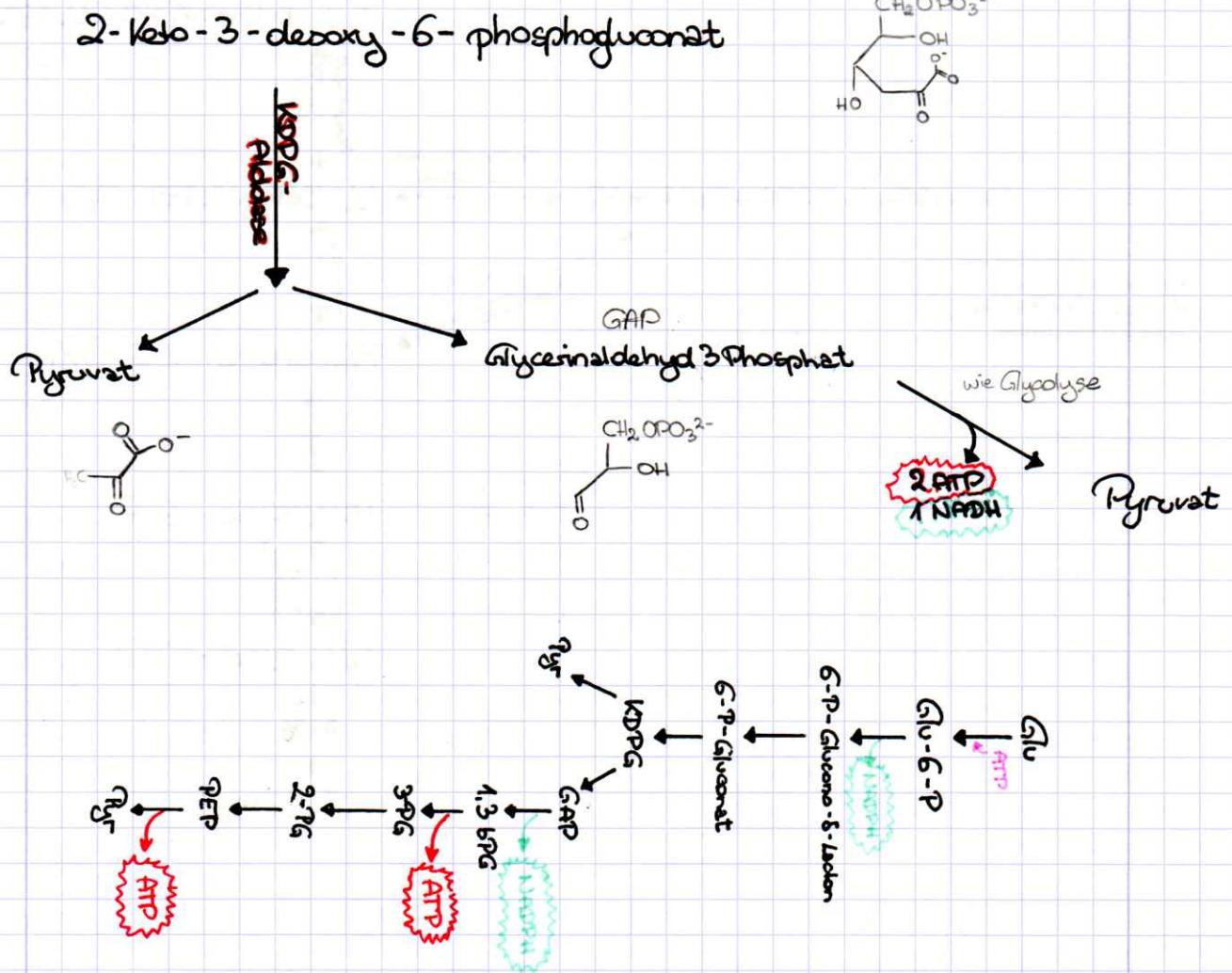
→ Gärung
 → TCA + Atmungskette

KDPG-Weg

Fritsch-Doudoroff-Weg
Alternative zur Glykolyse (2ATP)
hier P: 1 ATP

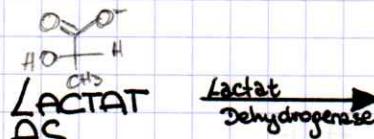


NADPH reines Reduktionsmittel
NADH dient für ATP



Glykolyse mit
größeren Enzymen
3x Richtung
in andere

GLUCONEOGENESE

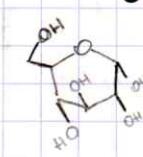
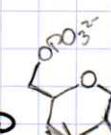
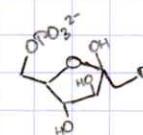
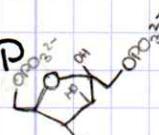
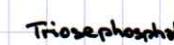
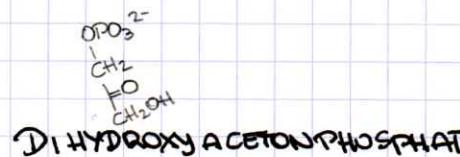
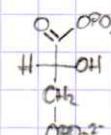
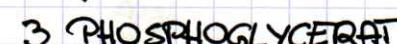
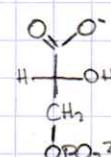
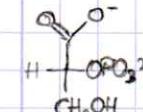
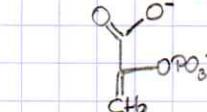
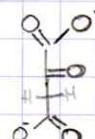


Glykofolsäure

Hungry Pirates Pick All the greatest
Ferulic acid Phosphoric Acid Tri-
Isomeric Phosphate Isononanoate
Kinetin Isononanoate Dehydrogenase

Picked Pumpkins ever Picked
Phosphoglycerat kinase Mutase Endoase Puruvat kinase

(ATP)ATGPEO
-2 ATP +4 ATP



Pyruvat Carboxylase
Fructose 1,6 Biphosphatase
Glucose 6 Phosphatase