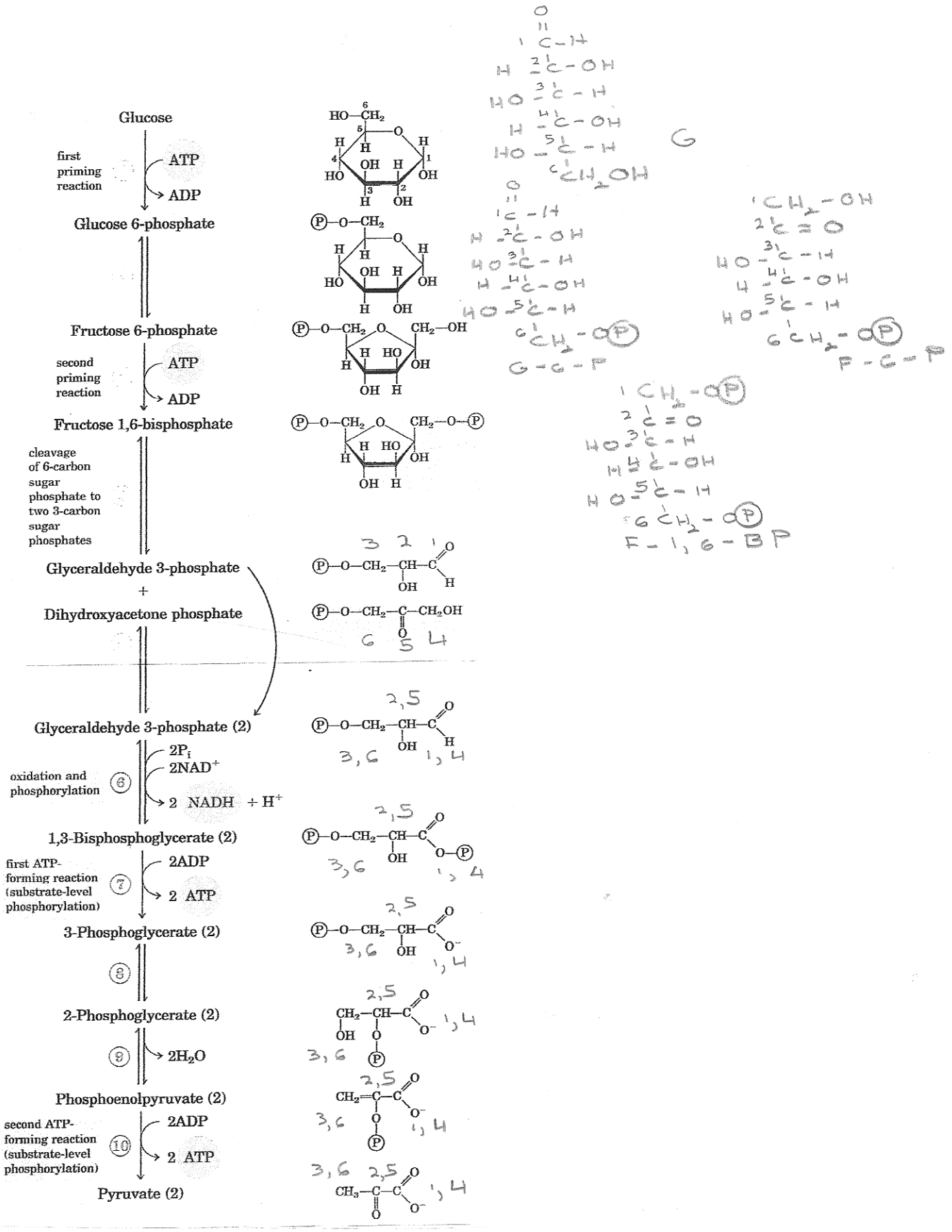
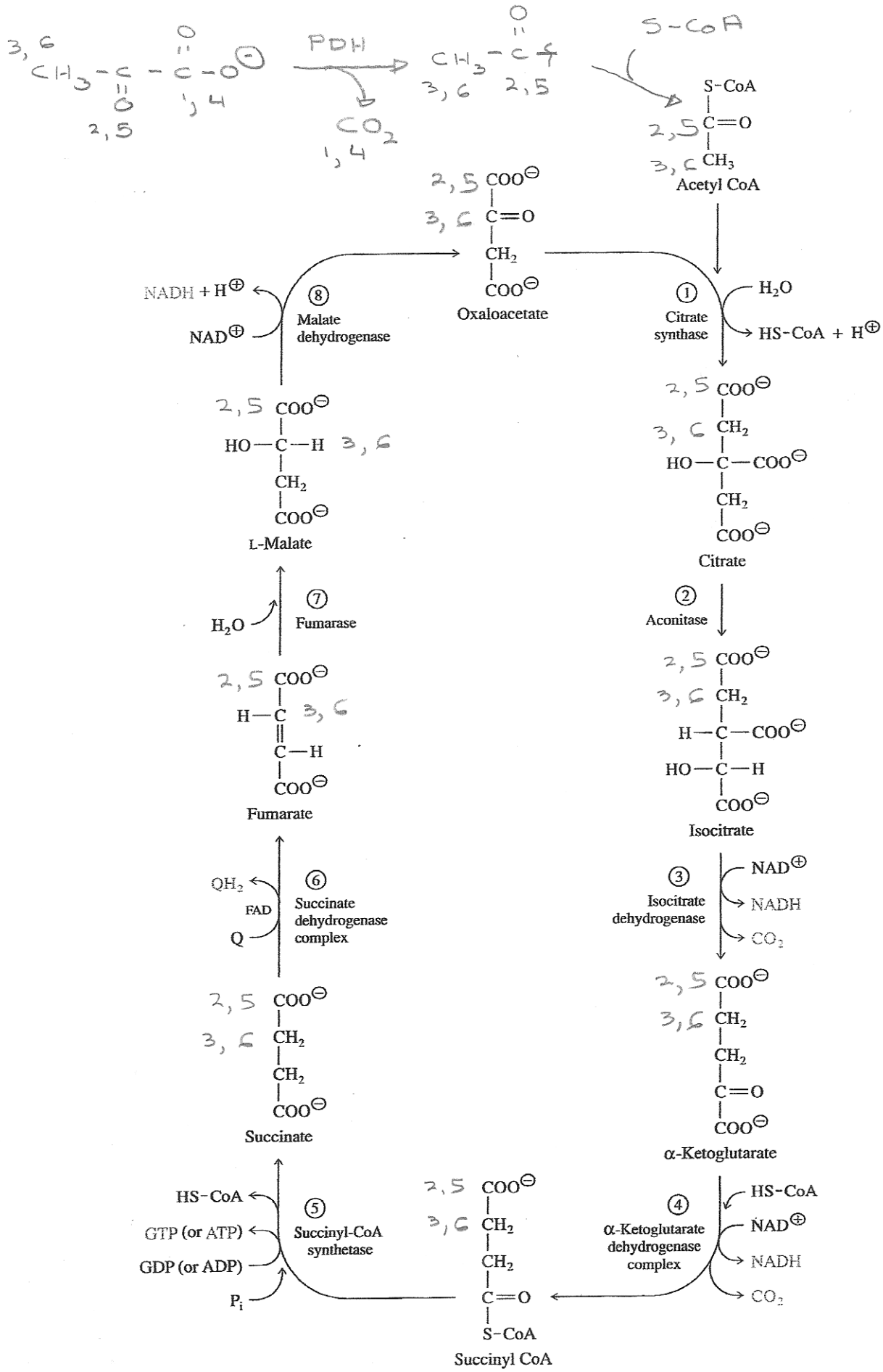

Glucose
first priming reaction
ATP
ADP
Glucose 6-phosphate
Fructose 6-phosphate
second priming reaction
ATP
ADP
Fructose 1,6-bisphosphate
cleavage of 6-carbon sugar phosphate to two 3-carbon sugar phosphates
Glyceraldehyde 3-phosphate
+
Dihydroxyacetone phosphate
Glyceraldehyde 3-phosphate (2)
oxidation and phosphorylation
6
2Pi
2NAD+
2 NADH + H+
1,3-Bisphosphoglycerate (2)
first ATP-forming reaction (substrate-level phosphorylation)
7
2ADP
2 ATP
3-Phosphoglycerate (2)
8
2-Phosphoglycerate (2)
9
2H2O
Phosphoenolpyruvate (2)
second ATP-forming reaction (substrate-level phosphorylation)
10
2ADP
2 ATP
Pyruvate (2)
G
G-6-P
F-6-P
F-1,6-BP


PDH
CO_2
S-CoA
Acetyl CoA
Oxaloacetate
① Citrate synthase
H_2O
HS-CoA + $H^{\oplus}$
Citrate
② Aconitase
Isocitrate
③ Isocitrate dehydrogenase
$NAD^{\oplus}$
NADH
CO_2
α-Ketoglutarate
④ α-Ketoglutarate dehydrogenase complex
HS-CoA
$NAD^{\oplus}$
NADH
CO_2
Succinyl CoA
⑤ Succinyl-CoA synthetase
HS-CoA
GTP (or ATP)
GDP (or ADP)
P_i
Succinate
⑥ Succinate dehydrogenase complex
QH_2
FAD
Q
Fumarate
⑦ Fumarase
H_2O
L-Malate
⑧ Malate dehydrogenase
NADH + $H^{\oplus}$
$NAD^{\oplus}$