

(28) **Today**

Chap 13.1: Glycolysis (skip 13.1.3)

Citric acid cycle **Next Class** (29)

Chap 13: ~~Glycolysis Energetics and~~
~~Gluconeogenesis~~

(30) **Second Class from Today**

Test 3 on Wednesday, April 23

Third Class from Today (31)

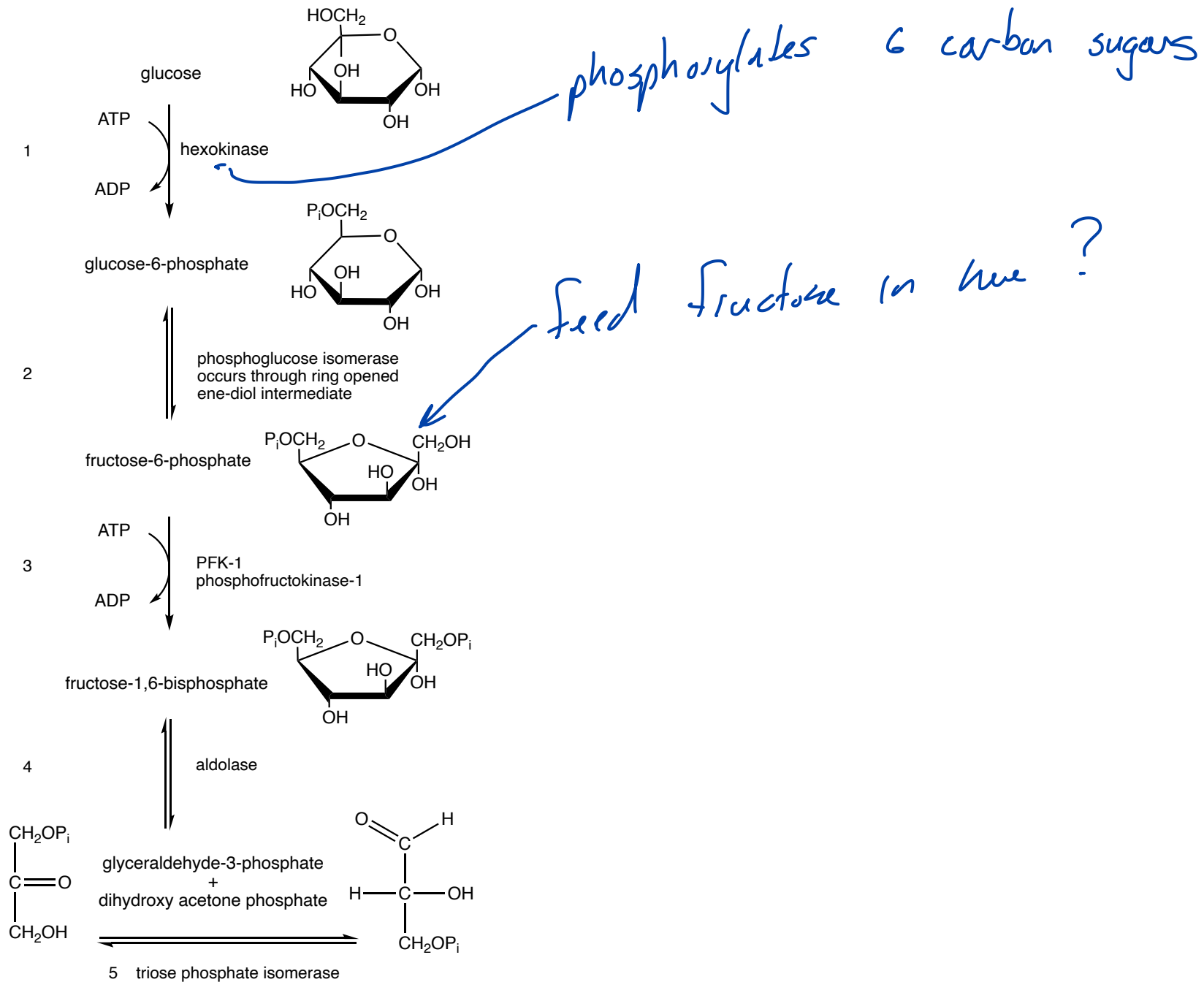
~~Chap 13: Pentose Phosphate Pathway~~

No Classes on Monday April 21

Please hand in reworked test 2

Glycolysis: Where does Fructose Feed into Glycolysis

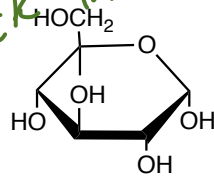
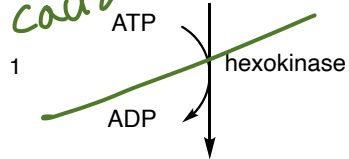
Section 13.1, 3



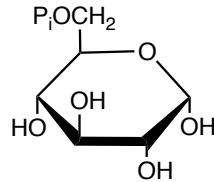
Glycolysis: Where does Fructose Feed into Glycolysis

Section 13.1

*High ATP conc
courses Feedback inhibition*



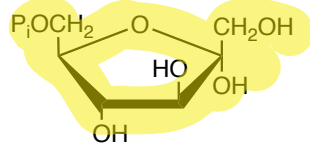
glucose-6-phosphate



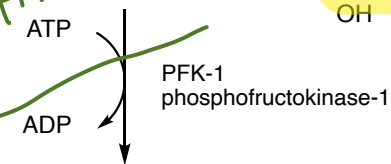
2

phosphoglucose isomerase
occurs through ring opened
ene-diol intermediate

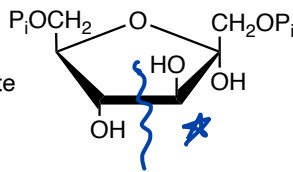
fructose-6-phosphate



*High ATP
conc*

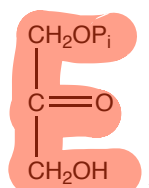


fructose-1,6-bisphosphate

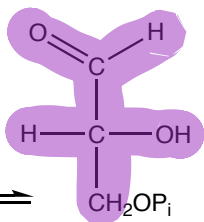


4

aldolase

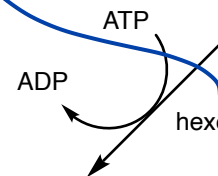


glyceraldehyde-3-phosphate
+
dihydroxy acetone phosphate

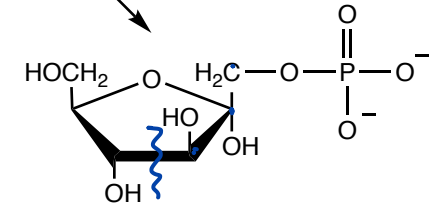
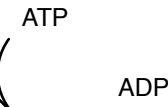


5 triose phosphate isomerase

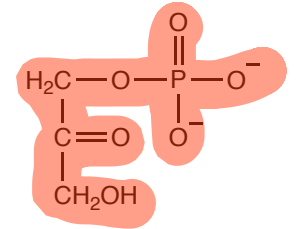
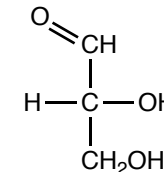
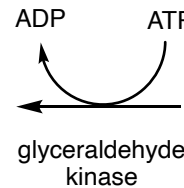
*only good at phosphorylating
fructose at extremely high conc...
higher than found
in muscle tissue*



fructokinase



fructose-1-phosphate aldolase

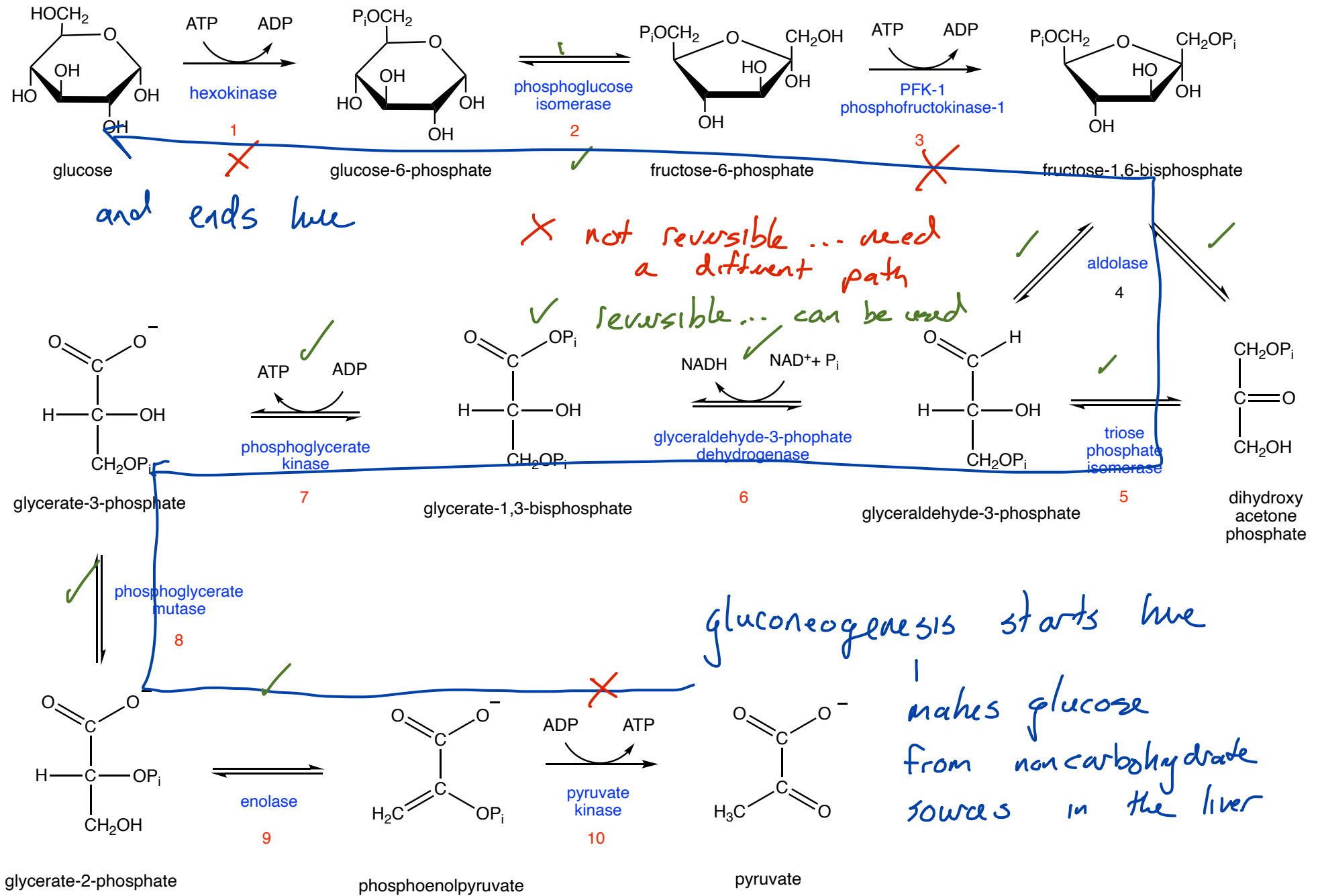


*Fructose enters glycolysis
after 2 control pts.
fructose is metabolized faster
than glucose*

*same kind of
reverse aldol
condensation*

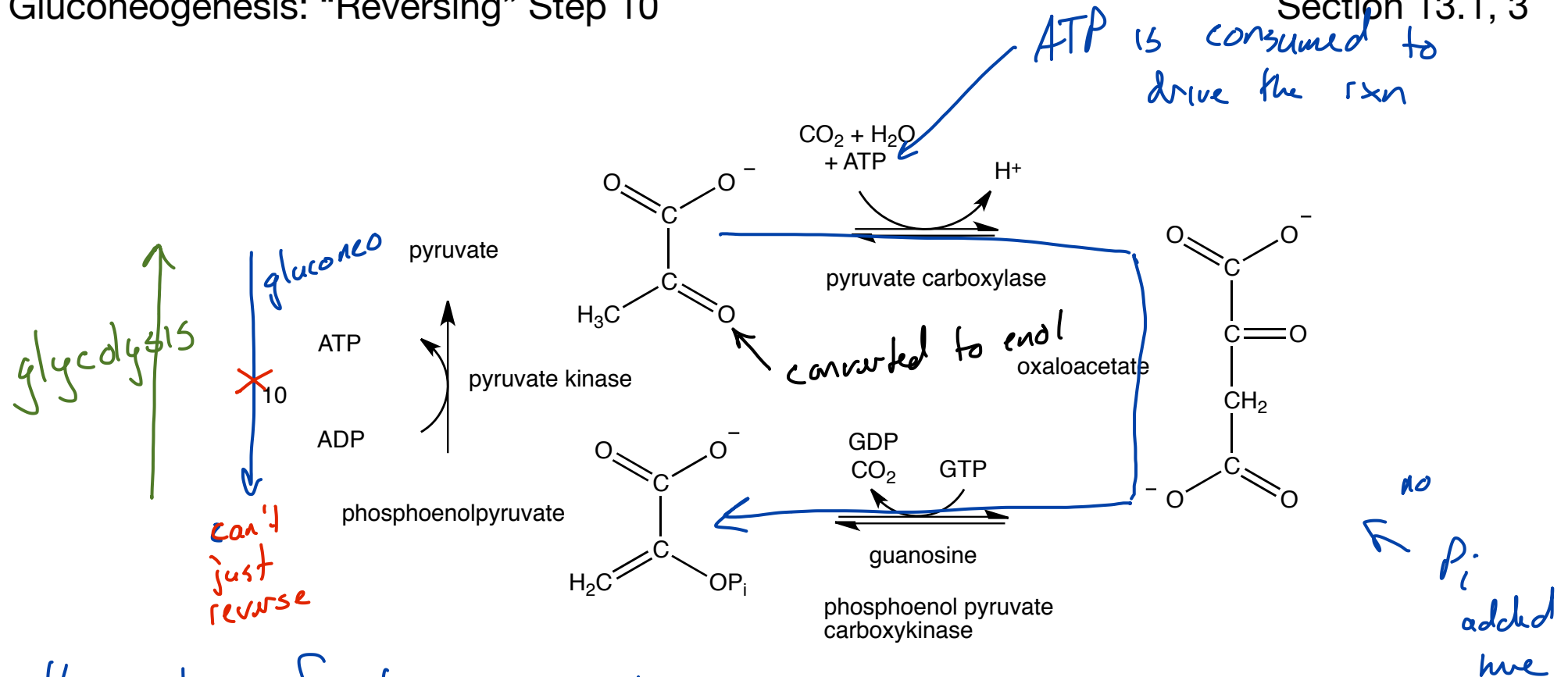
Gluconeogenesis: "Reversing" Glycolysis

Section 13.1, 3

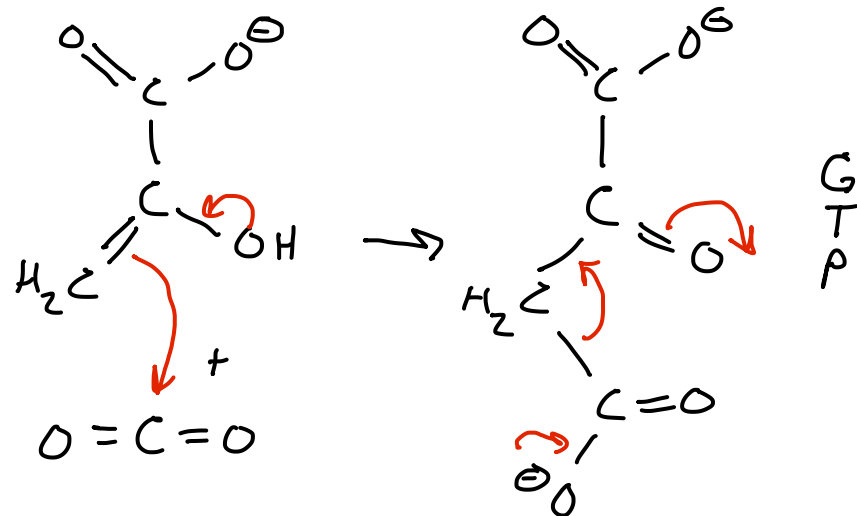


Gluconeogenesis: "Reversing" Step 10

Section 13.1, 3



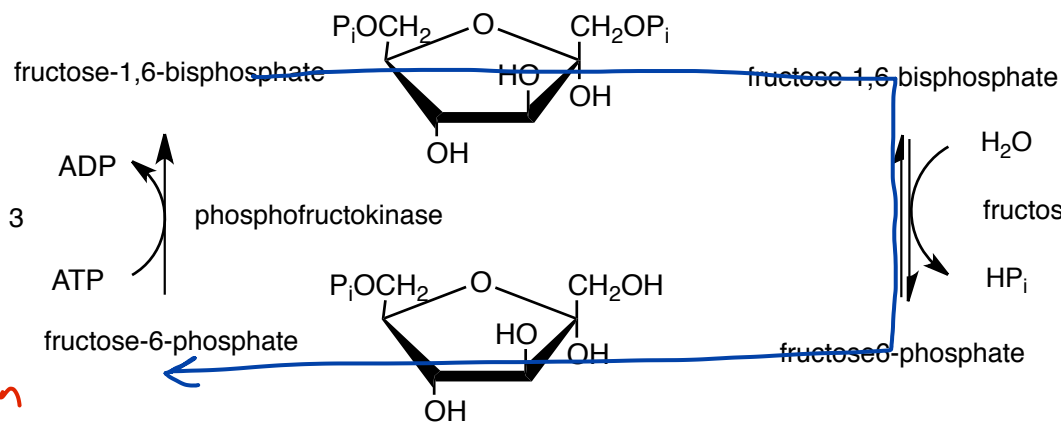
this step of gluconeogenesis
"burns" two ATP
equivalents. (GTP + ATP)



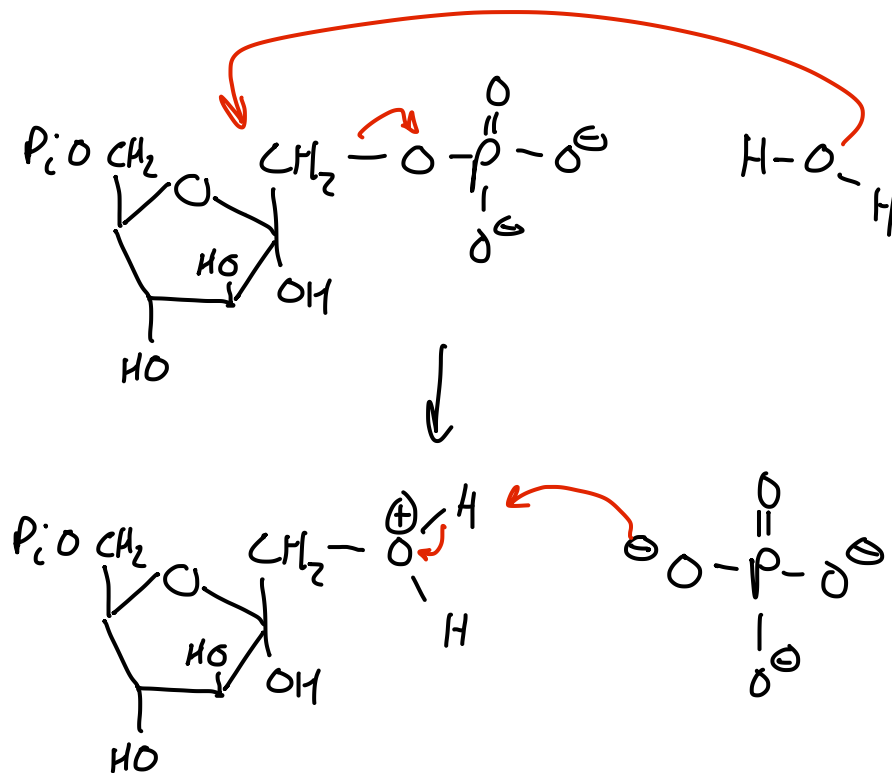
Gluconeogenesis: "Reversing" Step 3

Section 13.1, 3

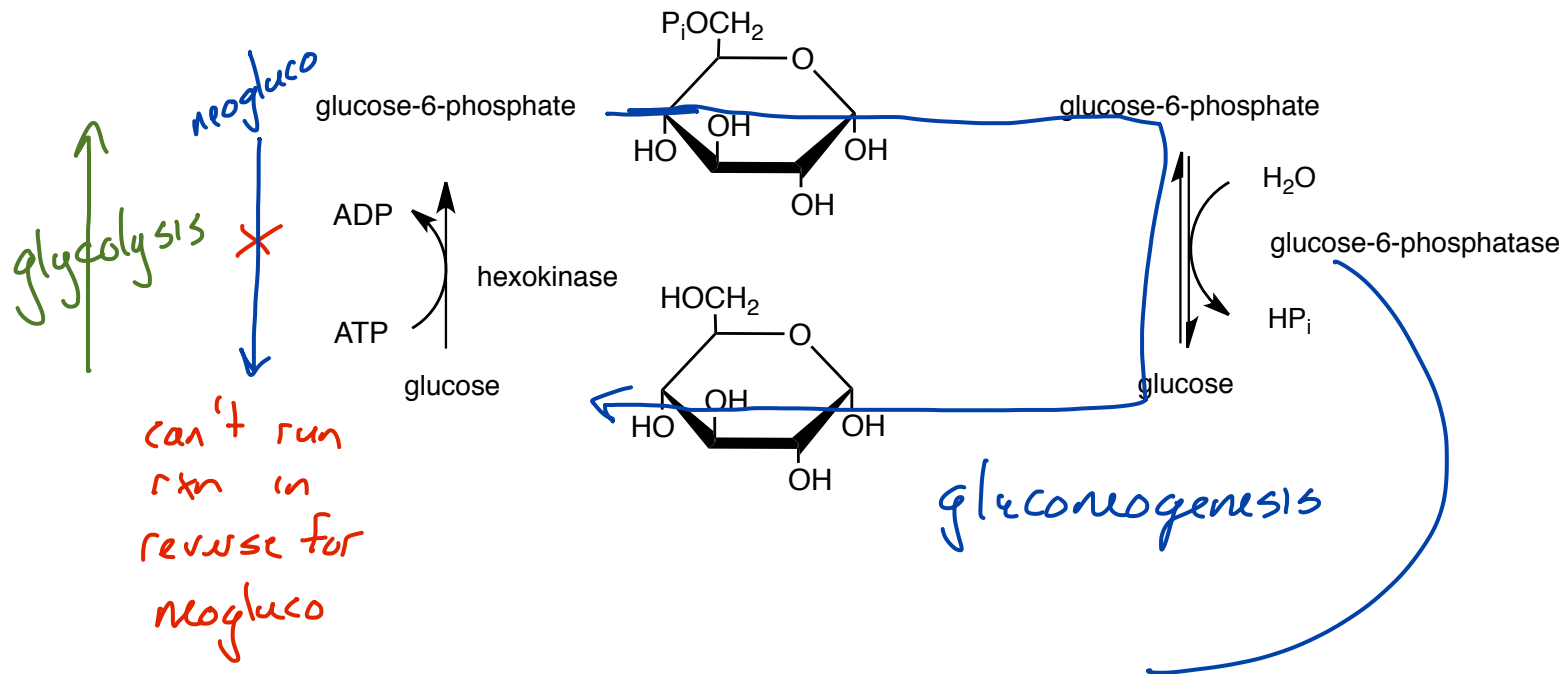
glycolysis ↑
neogluco ↓
can't run rxn in reverse for neogluco



hydrolyze P_i off instead of trying to make ATP



burned off a good LG from fructose



hydrolyzing sugar to phosphate bond releases energy and "reverses" step 3