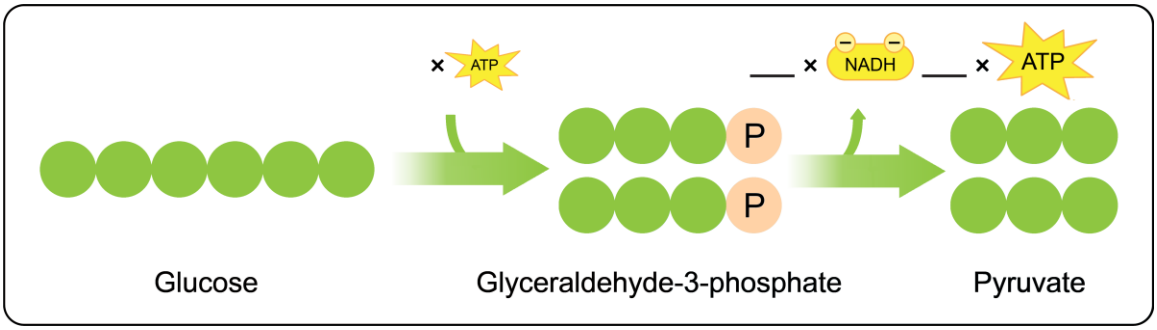
CONCEPT: GLYCOLYSIS SUMMARY

Glycolysis Energy Output

● Glycolysis oxidizes glucose to pyruvate and produces __ NADH and __ ATP molecules.



	Glycolysis
Start Molecule	Glucose
ATP	
$FADH_2$	
NADH	
End Molecule	2 Pyruvate

● Reactions 1 and 3 are irreversible and use ATP.

MEMORY TOOL 1: I IRResponsibly ___e one-_____ of a pizza.

● Reaction 6 produces 2 NADH.

● Reactions 7 and 10 produce 2 ATP each.

MEMORY TOOL 2: A 2ND _____-pack AT the _____ - _____.

MEMORY TOOL 3: Road 10 is ONE WAY

EXAMPLE: Which of the following glycolysis reactions produce ATP?

a) Reactions 6 and 7

b) Reactions 1 and 3

c) Reactions 7 and 10

d) Reactions 3 and 10

PRACTICE: How many moles of NAD^+ are required to convert 50.0 g of glucose into pyruvate? How many moles of ATP are produced?

a) 0.555 mole NAD^+ and 1.11 mol ATP.

b) 1.11 mole each of NAD^+ and ATP.

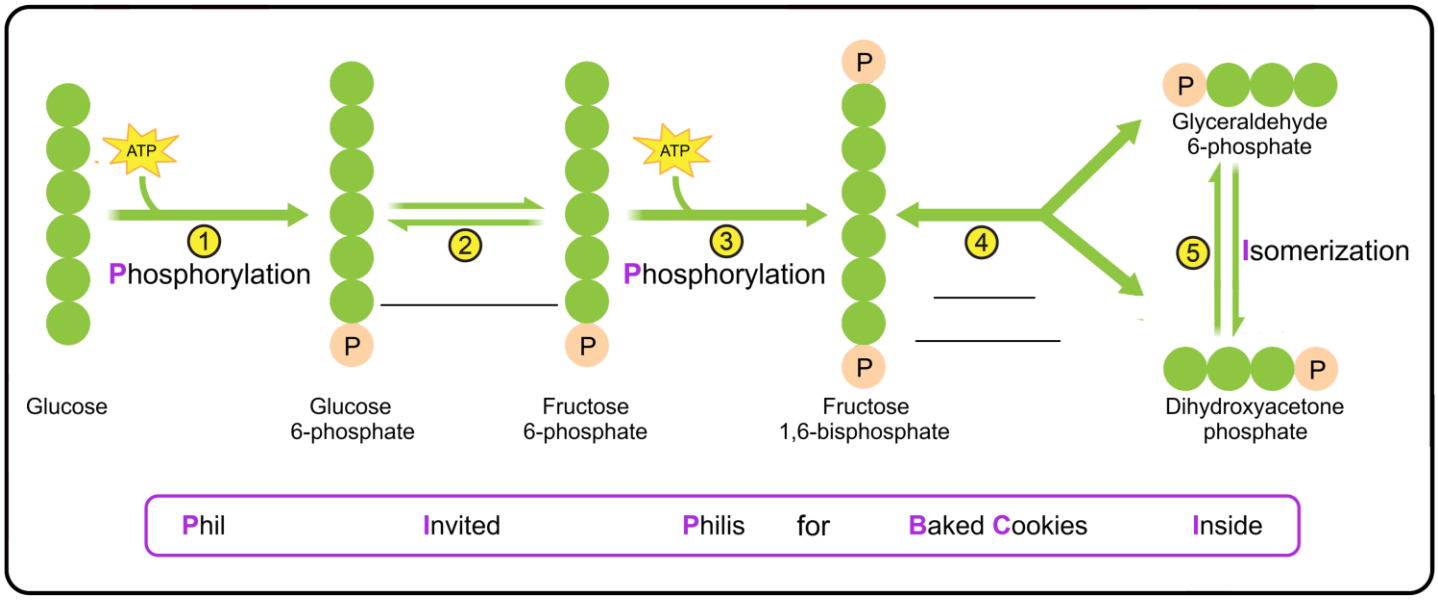
c) 0.278 mole NAD^+ and 0.555 mol ATP.

d) 0.555 mole each of NAD^+ and ATP.

CONCEPT: GLYCOLYSIS SUMMARY

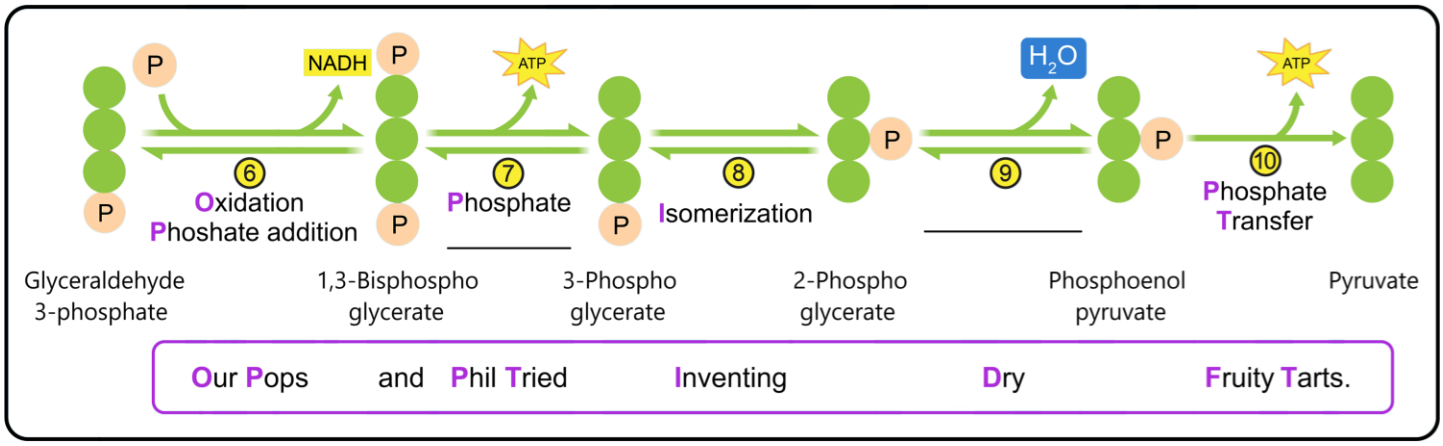
Remembering Glycolysis: Reactions 1–5

MEMORY TOOL 4: Phil Invited Philis for Baked Cookies Inside.



Remembering Glycolysis: Reactions 6–10

MEMORY TOOL 5: Our Pops and Phil Tried Inventing Dry Fruity Tarts.



CONCEPT: GLYCOLYSIS SUMMARY

EXAMPLE: How many reactions in glycolysis involve an isomerization reaction?

a) 1

b) 2

c) 3

d) 4

PRACTICE: Identify each of the following reaction of glycolysis as oxidation (O), isomerization (I), phosphorylation (P), of dehydration (D).

a) _____ Reaction 3

b) _____ Reaction 6

c) _____ Reaction 8

d) _____ Reaction 9

PRACTICE: How many reactions of the glycolysis pathway fall into to the following reaction categories?

a) _____ Isomerization

b) _____ Dehydration

c) _____ Oxidation

d) _____ C–C bond cleavage

e) _____ Phosphate transfer