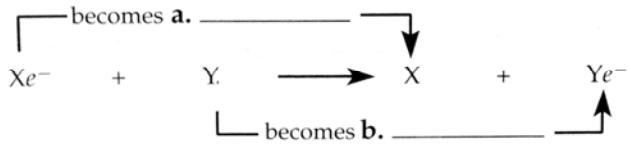


Name _____

Chapter 9 Respiration Interactive Questions

INTERACTIVE QUESTION 9.2

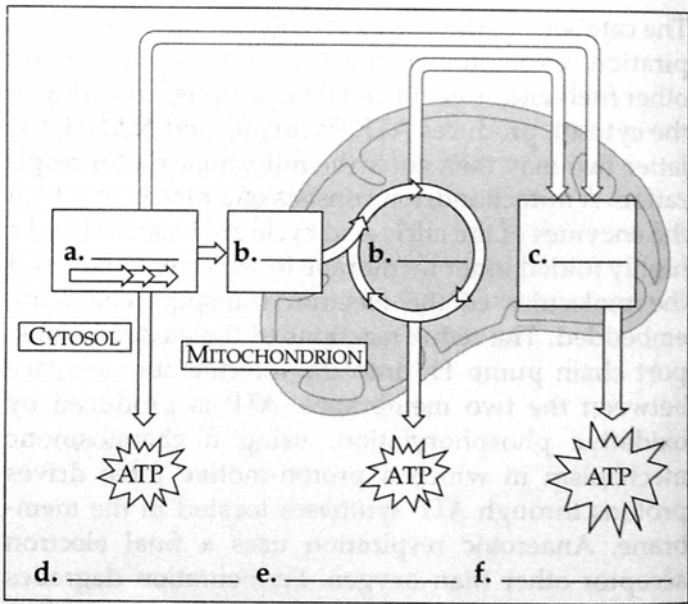
Fill in the appropriate terms in the following equation.



Xe^- is the reducing agent; it **c.** _____ electrons.
 Y is the **d.** _____; it **e.** _____ electrons.

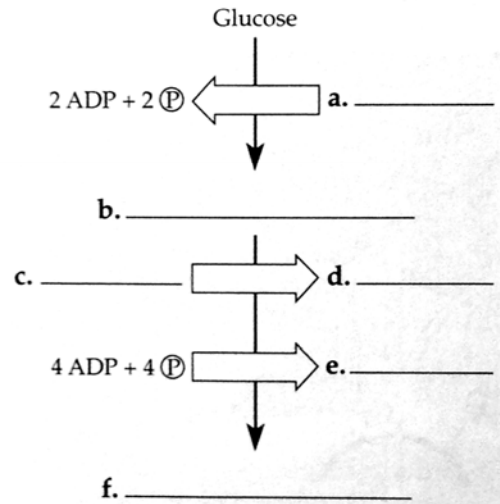
INTERACTIVE QUESTION 9.5

Fill in the three stages of cellular respiration (a–c). Indicate whether ATP is produced by substrate-level or oxidative phosphorylation (d–f). Label the arrows indicating electrons carried by NADH.



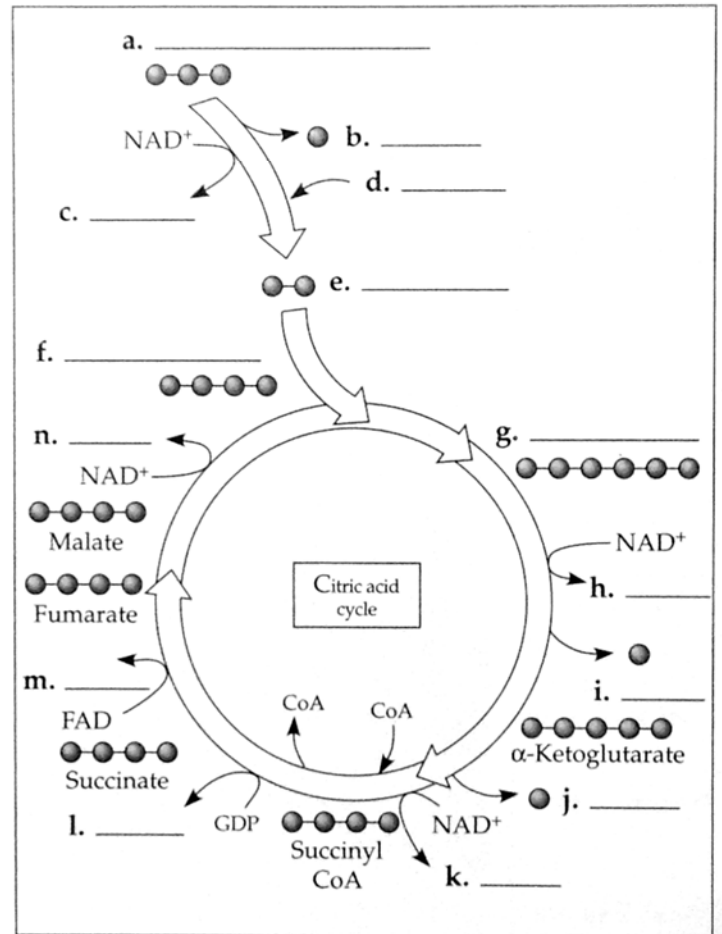
INTERACTIVE QUESTION 9.6

Fill in the blanks in the following summary diagram of glycolysis.



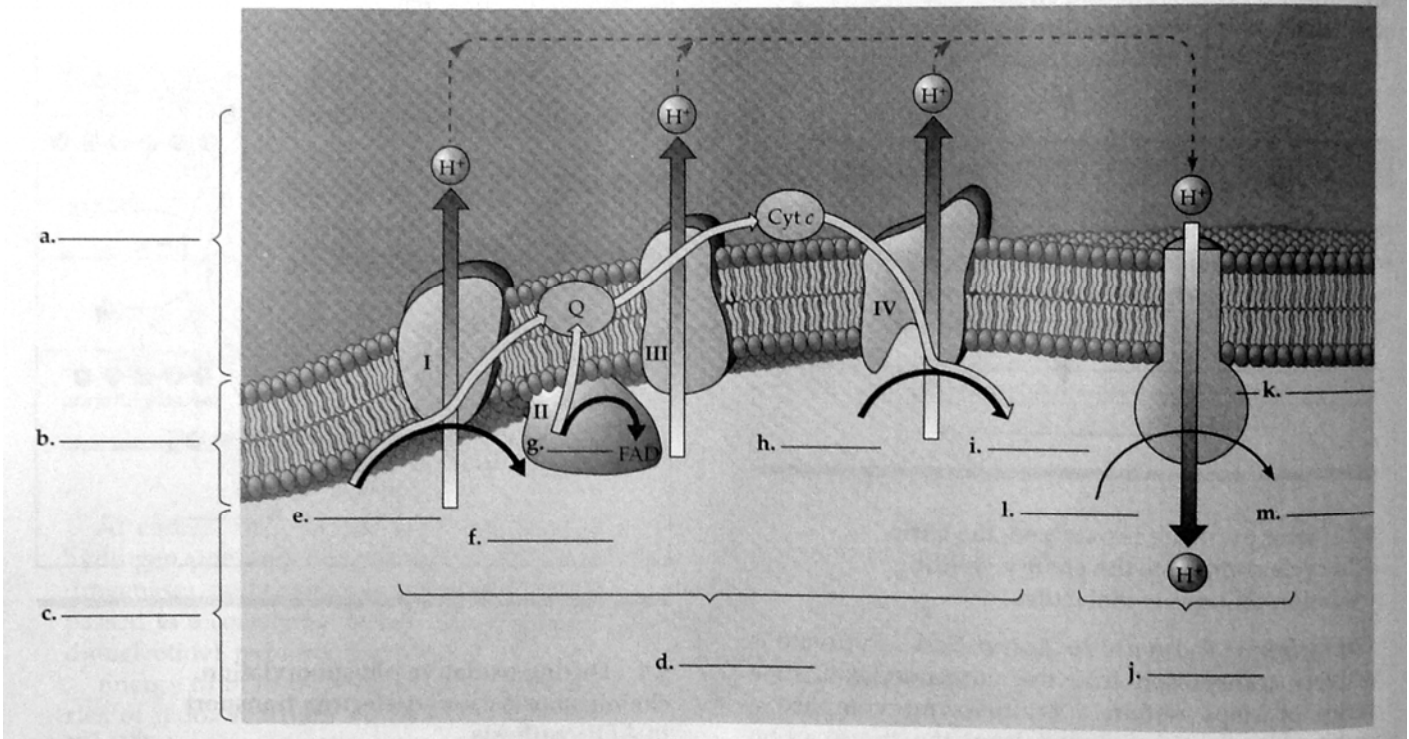
INTERACTIVE QUESTION 9.7

Fill in the blanks in the following diagram of the citric acid cycle. Gray balls represent carbon atoms.



INTERACTIVE QUESTION 9.8

Label the following diagram of oxidative phosphorylation in a mitochondrial membrane.



INTERACTIVE QUESTION 9.9

Fill in the following tally for the maximum ATP yield from the oxidation of one molecule of glucose to six molecules of carbon dioxide.

Process	# ATP
Initial phosphorylation of glucose:	a. _____
Substrate-level phosphorylation: in glycolysis	b. _____
in c. _____	2
Oxidative phosphorylation:*	d. _____
Maximum Total	e. _____

*2.5 ATP for each of the f. _____ NADH from pyruvate → acetyl CoA and the g. _____ NADH from citric acid cycle; 1.5 ATP for each of the h. _____ FADH₂ from citric acid cycle; 2.5 or 1.5 ATP for each of the i. _____ NADH from glycolysis, depending on which shuttle passes electrons across the membrane.