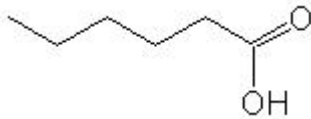


Name: _____

Date: _____

- [2 pt] 1. What characteristic of fatty acids make it a better energy storage molecule (in general), compared to glycogen?
- [4 pt] 2. Where are fats primarily stored? What two important structural roles does fat play (ie, when its not used as an energy source)?
- [3 pt] 3. How can vegetarians (people that don't include very many fats in their diet) accumulate fat? Explain.

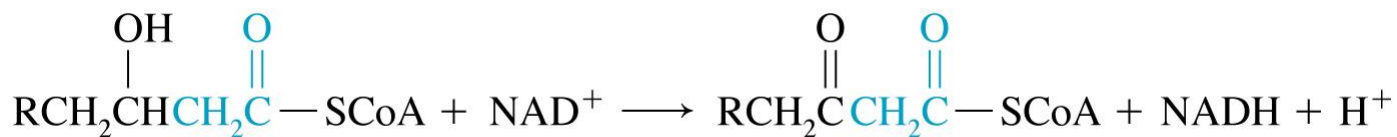
- [4 pt] 4. What is meant by the term beta-oxidation or beta-cleavage? In the molecule below, show where the cleavage would occur. How many molecules of acetyl-CoA can be produced from the molecule?



- [4 pt] 5. How many NADH and FADH₂ are formed during each cycle of beta-oxidation? How many ATP are generated when the molecule in the previous question undergoes beta-oxidation? Explain.

CHE 102 - Homework - Ch 35a

- [6 pt] 6. For the following reaction, circle the molecule being oxidized. Is the cell gaining or losing energy in this reaction? Is this an example of anabolism or catabolism? Explain.

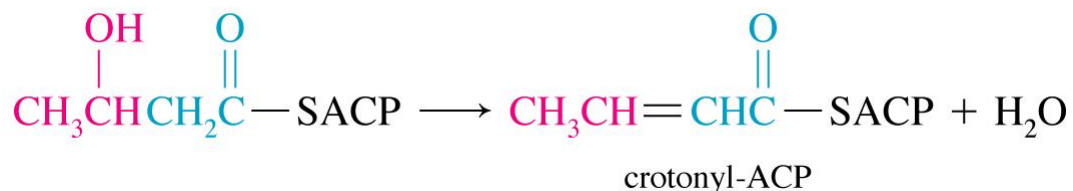


- [6 pt] 7. What are three major differences between beta-oxidation and lipogenesis?

- [3 pt] 8. For each cycle of lipogenesis, how many ATP (or equivalents) are consumed?

- [4 pt] 9. In order to synthesis palmitic acid, how many cycles of lipogenesis occur. How many total ATP would be required to synthesis palmitic acid? Explain.

- [4 pt] 10. For the following reaction, what type(s) of reaction occurs? Is the cell gaining or losing energy in this step? Explain.



11. What is your favorite number? Explain.