

## Quiz 9

1. To synthesize an acyl-CoA with 12 carbons (i.e. 12:0) from acetyl-CoA molecules using acetyl-CoA carboxylase and fatty acid synthase:
  - a. How many total acetyl-CoA are needed?
  - b. How many total  $\text{HCO}_3^-$  are needed?
  - c. How many malonyl-CoA molecules will be utilized?
  - d. How many NADH are needed?
  - e. How many  $\text{FADH}_2$  are needed?
  - f. How many NADPH are needed?
  - g. How many  $\text{CO}_2$  are released?
  - h. How many ATP are needed?
  
2. Where does fatty acid synthesis take place within a cell?
  
3. What is one mechanism the human body utilizes as an antioxidant defense?