

Name: _____

Key

Quiz 27

1. Rank the following fatty acids based on the amount of ATP you expect each to yield from complete oxidation (least to most):

18:0

most

18:1 Δ^6

least

18:1 Δ^9

intermediate

2. Explain your reasoning.

18:0 \rightarrow contains the most C-C + C-H bonds \rightarrow most ATP

18:1 Δ^9 \rightarrow skip one round of acyl-CoA dehydrogenase so down one FADH₂ compared to 18:0

18:1 Δ^6 \rightarrow burn a NADH so down one NADH compared to 18:0.

NADH generates more ATP than FADH₂