$\frac{\text{Math } 235 \text{ - } \text{Dr. Miller - Group Biconditional Proofs, Fall } 2024}{\text{Counts as Discussion/Participation, 9-16-2024}}$

Using formal definitions of even and odd, write a two-part proof of the following Proposition: Let $m \in \mathbb{Z}$. Then $3m^3 - 5$ is odd if and only if m is even.