

Nguyen Xuan Binh 887799 Round 6 Problem 3

A golf ball has dimples on its surface. Explain why

Golf is the game where players should hit the ball as far as possible

=> The goal of the design is to reduce drag force of the air.

Assume that all golf games are played in a windless air => when the golf is hit, the flow around the golf ball should be laminar. Assume that the golf ball is a smooth ball. As the laminar boundary layer go over the ball,

the air will go smoothly and separates the ball from its wake region. This wake region will become turbulent with vortex that increases drag on the golf ball.

=> The dimples will make the boundary layer more turbulent that clings to the ball surface further back

=> Minimizing the wake area and decrease the drag force

