Proof Portfolio Problem 2

Before beginning you should read the proof portfolio document carefully. It is very important you read the information about academic honesty.

Note: Problems 2-10 are to be done entirely individually. It's considered a violation of academic honesty to even discuss which of the problems you choose. Additionally, problems 2-10 will have options. You should only choose one of Conjecture 2A or 2B to prove (or disprove and correct and prove). See the proof portfolio directions for what to do with statements that are false - there's an example there.

Conjecture 2A. If m is a type 2 integer and n is a type 0 integer then $mn + m^3$ is a type 1 integer.

Conjecture 2B. If a, b, and c are integers, then $ab + ac$ is an even integer.