MATH 201 FALL 2023 GRADED HOMEWORK #1

Write clearly. Both questions carry equal weight.

For each proposition, write a formal proof.

(1) Let n be an integer. Then $n^2 - 3n + 4$ is even.

(2) Let m and n be integers. If $5m^2 + 3n^2$ is even, then m and n have the same parity.