

MATH 2010-1 SPRING 2025 HOMEWORK #1

Write clearly. Both questions carry equal weight.

For each proposition, write a formal proof.

- (1) Consider integers m and n . If $7m - 3n + 5$ is odd, then m and n have the same parity.

- (2) If x and y are real numbers, then $4x^2 + 9y^2 \geq 12xy$.