

MATH 201 FALL 2021 GRADED HOMEWORK #1

Write clearly. Both questions carry equal weight.

For each question, write a formal proof.

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

(2) Let x be an integer. If $x^3 + 6x$ is odd, then x is odd.