Name: _____ Date: _____

Math 2710 — Worksheet

2026-10-22

Show your work. Write your final answer clearly.

1. Use proof by contradiction to prove the following statement.
   Suppose $a, b, c \in \mathbb{Z}$. If $a^2 + b^2 = c^2$, then a or b is even.

2. Use contrapositive proof to prove the following statement.
   Suppose $x \in \mathbb{R}$. If $x^5 - 4x^4 + 3x^3 - x^2 + 3x - 4 \geq 0$, then $x \geq 0$.